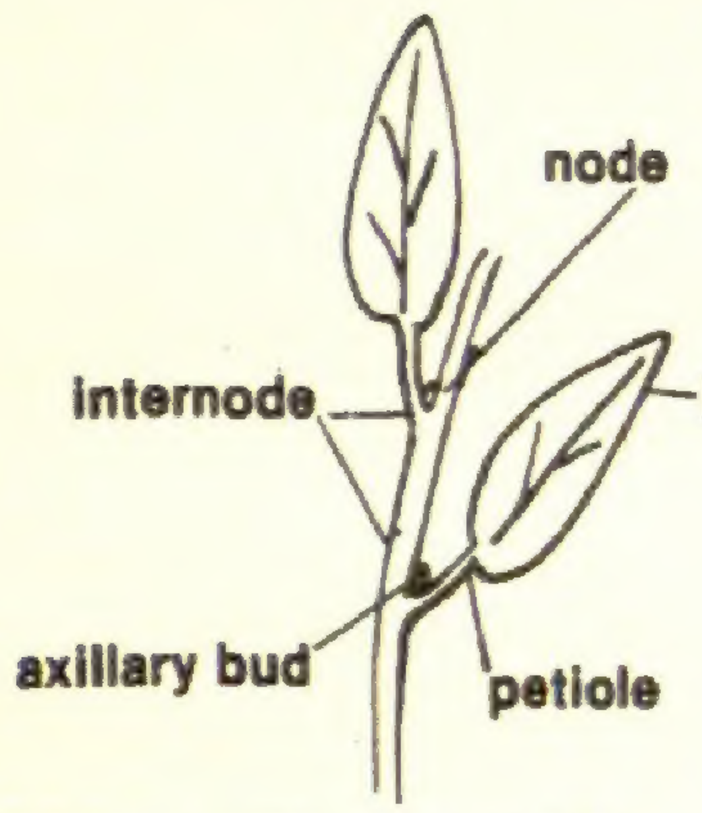
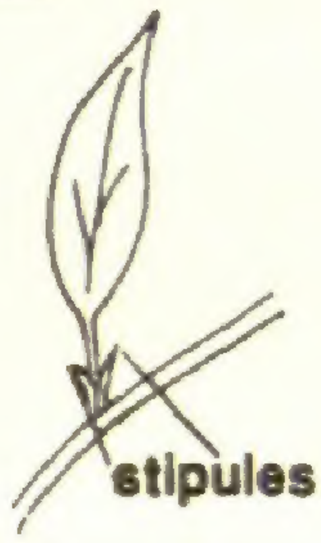
Missouri Wildflowers of the St. Louis Area

Erna R. Eisendrath

Clematis fremontii
var. riehlii

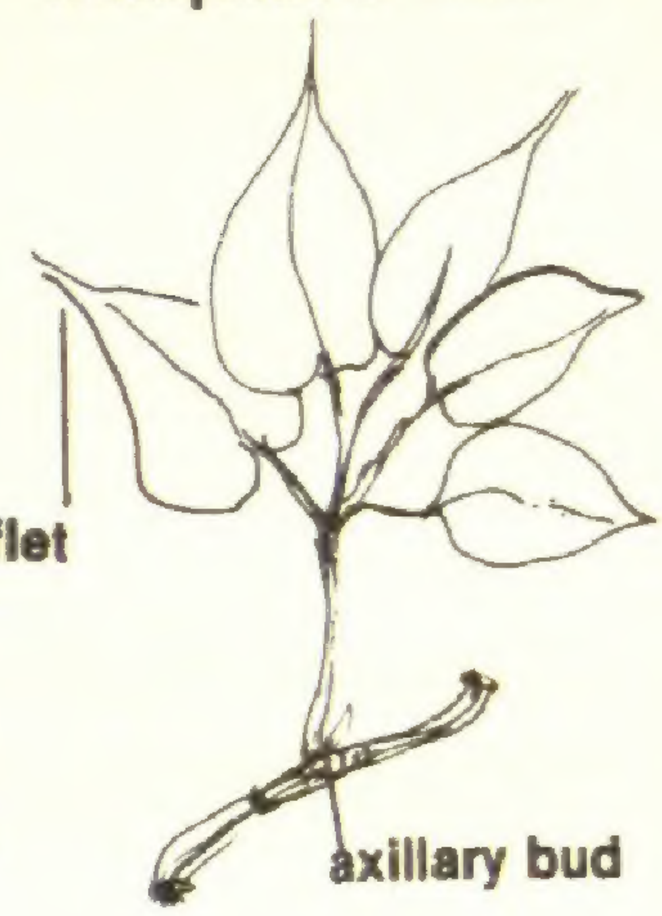


Stem with alternate simple leaves



Pinnately Compound Leaf

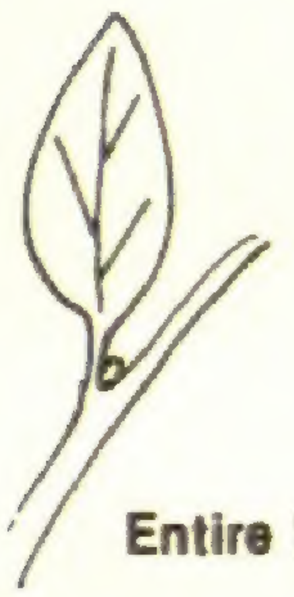
Palmately Compound Leaf



Opposite Simple, Sessile Leaves

Whorled Leaves

Basal Leaf Rosette



Entire Margin

Toothed Margin

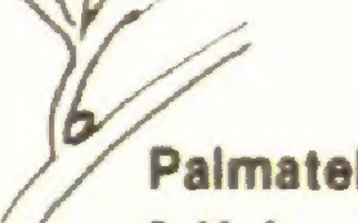
Pinnately Lobed & Veined Leaf

Palmately Lobed & Veined Leaf

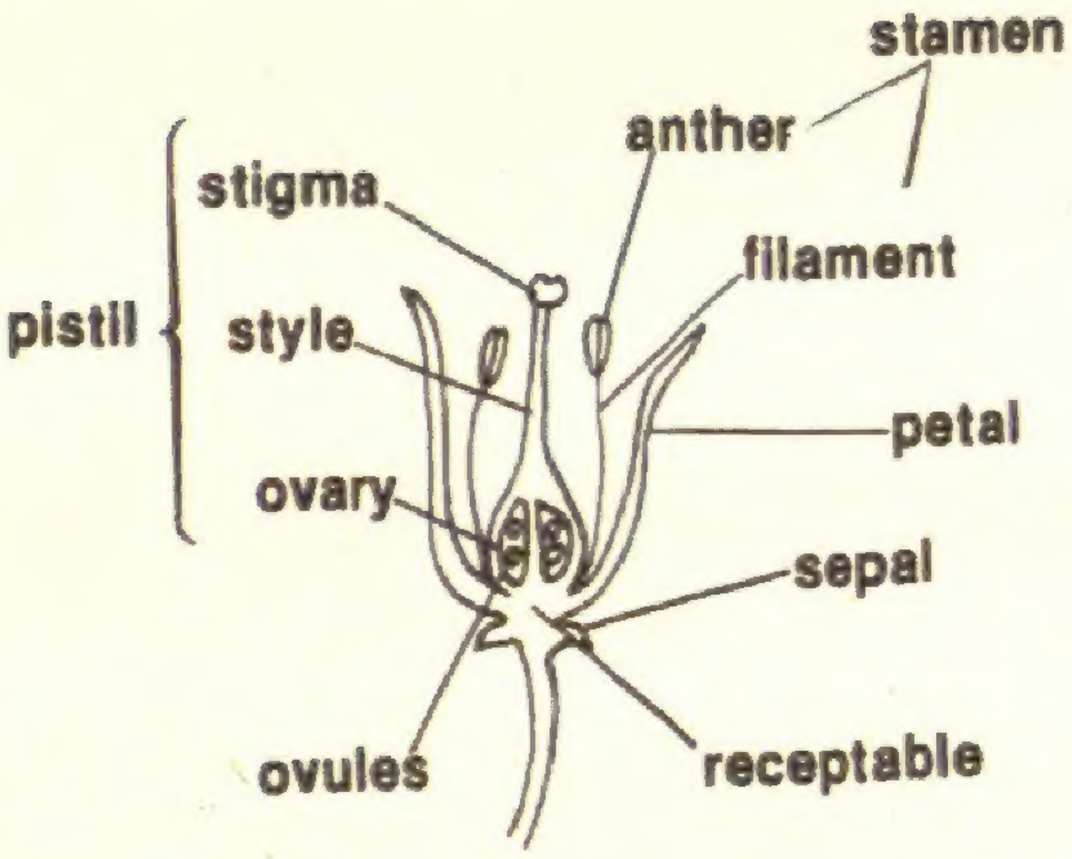
Basal Lobing:

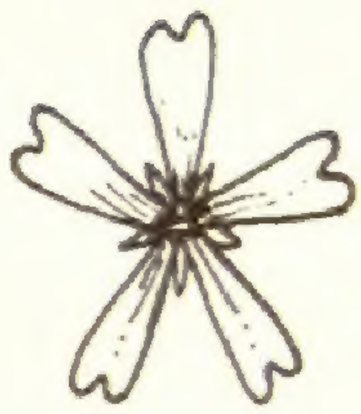
Cordate

Sagittate

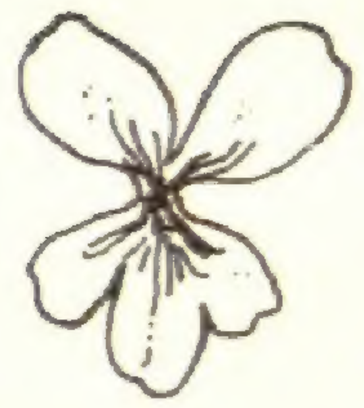


Clasping



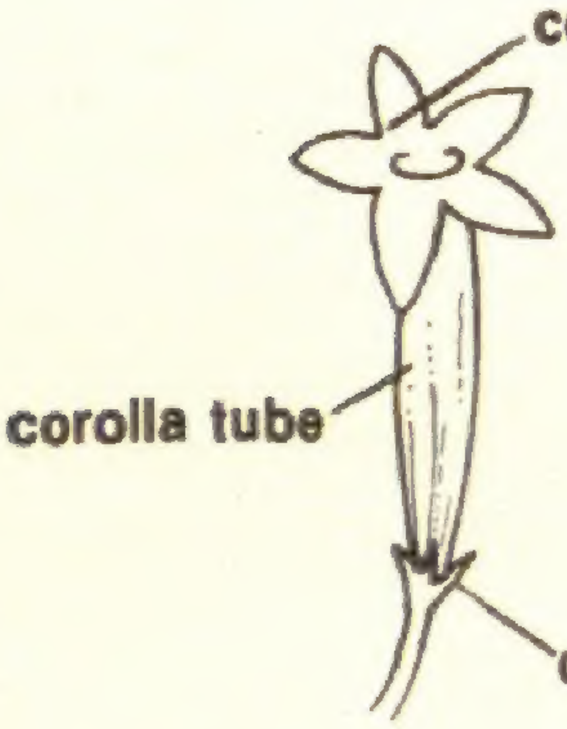


regular flower

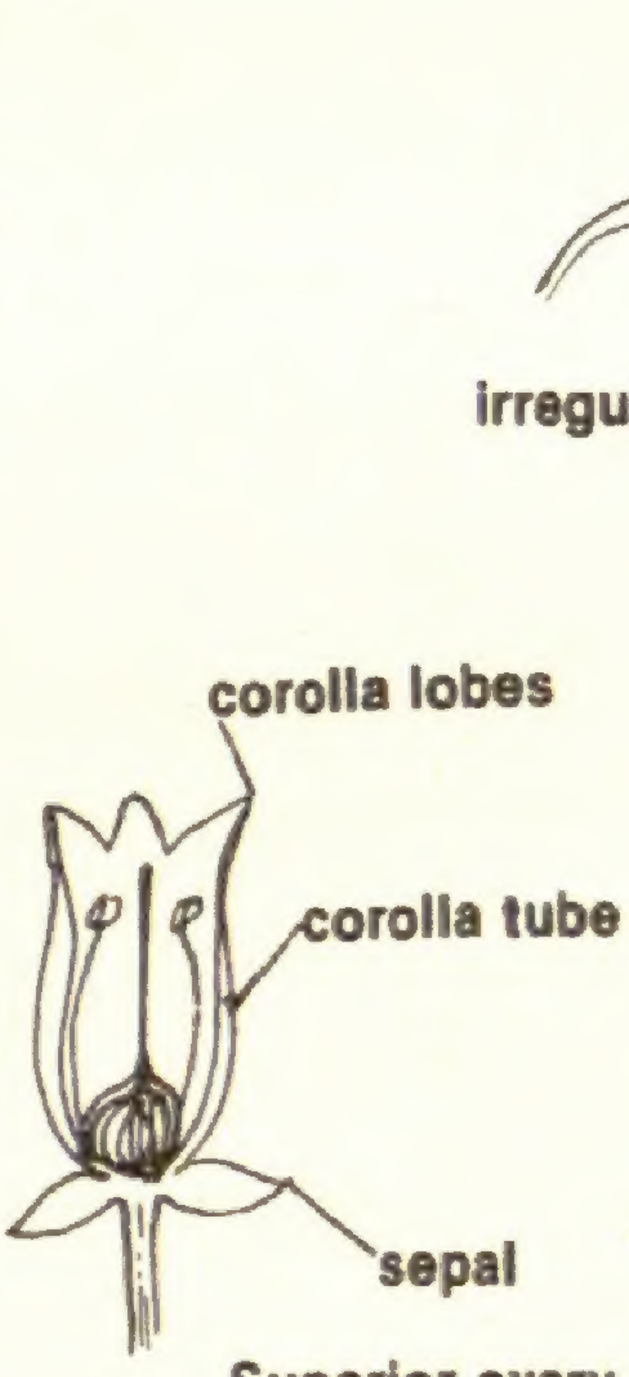


irregular flower

Superior Ovary (Hypogynous Flower)

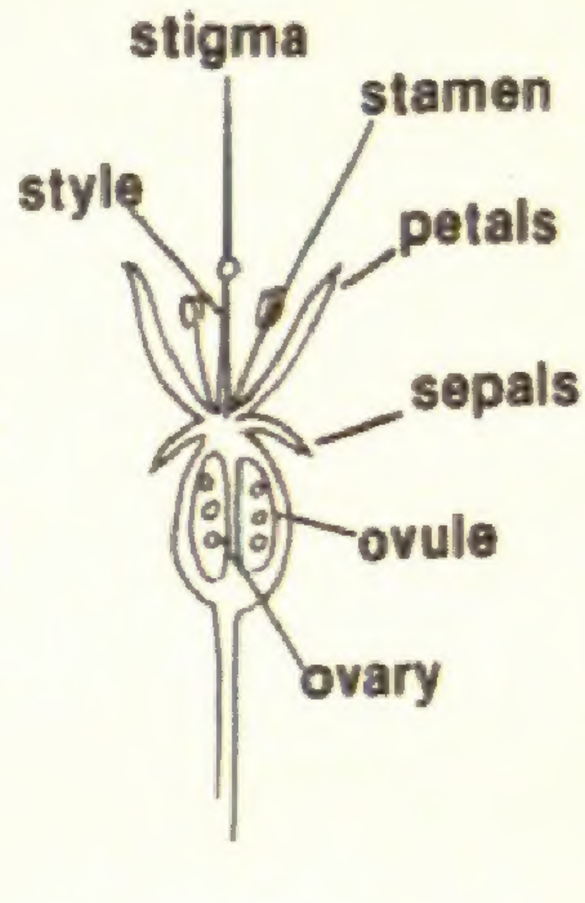


Corolla tube and lobes



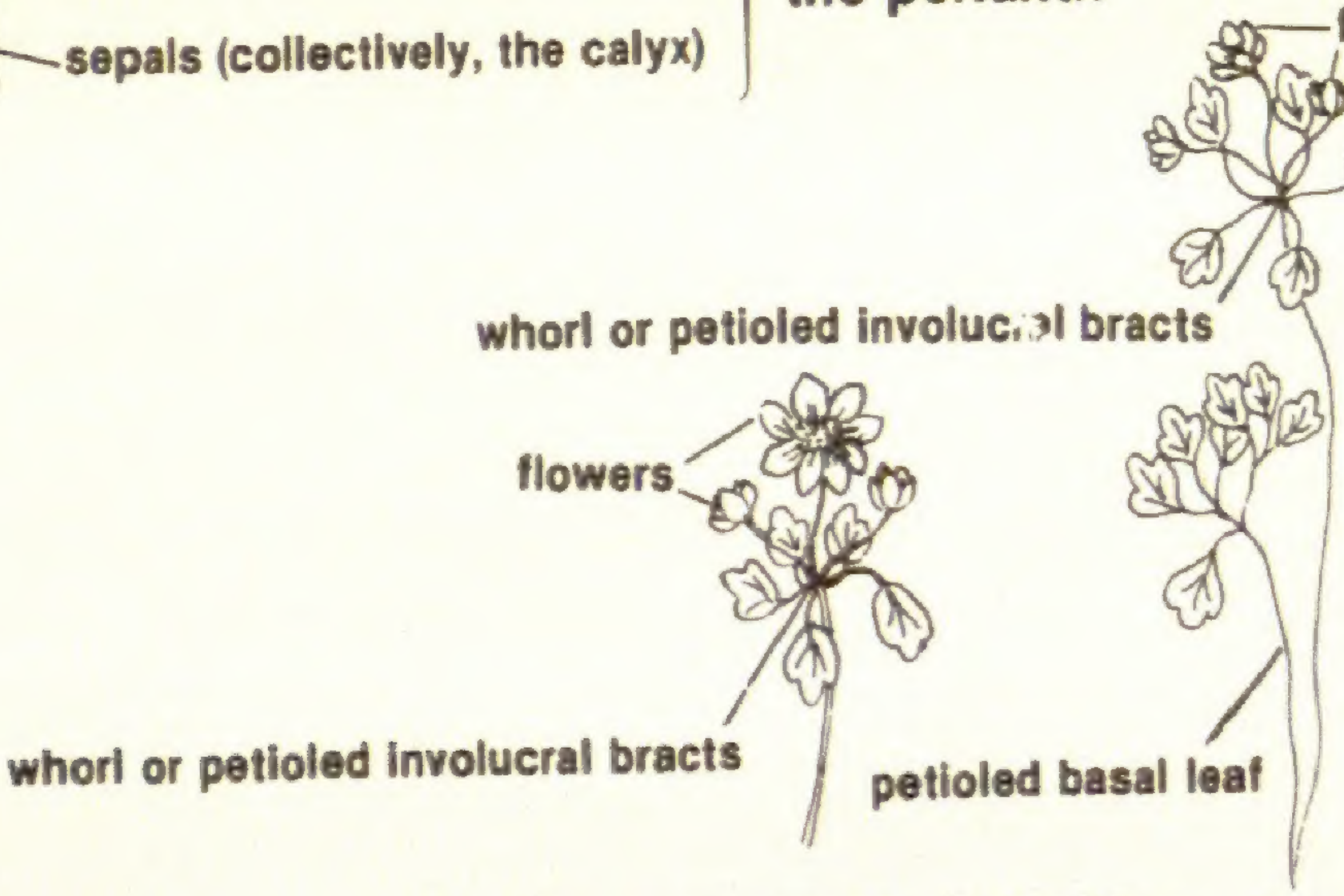
Superior ovary in flower with fused petals

irregular flower from side



Inferior Ovary (Epigynous Flower)

the perianth



Anemonella thalictroides

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of the St. Louis Area

REF
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Missouri Wildflowers

of the

St. Louis Area

by

Erna R. Eisendrath

Published by

Missouri Botanical Garden

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To my father

Charles M. Rice

MONOGRAPHS IN SYSTEMATIC BOTANY
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Identification guide to wildflowers by blooming time and color. 9

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INTRODUCTION

Although Missouri botanists and naturalists will be forever indebted to Julian Steyermark for the complete and accurate listing of our state's flora in his monumental **Flora of Missouri**, that book was never intended to be a field manual. Steyermark's earlier **Spring Flora of Missouri** is closer to the needs of a field botanist, but it is basically concerned with the plants that normally come into bloom before the first of June, and it has not been updated since its original publication in 1940. For these reasons, botanists and naturalists in the St. Louis area have great need for a convenient handbook that simplifies field identification, while also assuring the user that flowers that seem to be readily identified in floras covering larger areas do indeed inhabit our part of Missouri.

Missouri Wildflowers of the St. Louis Area includes* all except rare plants to be found blooming uncultivated in Franklin, Jefferson, St. Charles, Ste. Genevieve, St. Francis, St. Louis, Warren and Washington counties, all of which lie within an easy one-day field trip from St. Louis. However, most of the plants are much more widely distributed. The excellent maps in Steyermark's **Flora of Missouri** provide county distribution of each of the species included and can therefore be useful as a resource for longer field trips to more distant counties.

*In general, the plants included in this book are those that can be identified in the field with the help of a hand lens, without the necessity for disturbing the plants themselves. Several plant families have been eliminated (namely, grasses, sedges and rushes) because of the difficulty in distinguishing between and among their members. Species in certain genera in which species differentiation is difficult are not described. Rather, the identification and description stops at the genus level. These genera are:

Amaranthus	Amaranthaceae
Artemisa, Xanthium	Asteraceae
Onosmodium	Boraginaceae
Rorippa, Thlaspi	Brassicaceae
Cerastium	Caryophyllaceae
Chenopodium	Chenopodiaceae
Cuscuta	Convolvulaceae
Acalypha, Croton, Crotonopsis	Euphorbiaceae
Desmodium, Lespedeza, Strophostyles, Vicia	Fabaceae
Lycopus, Mentha	Lamiaceae
Linum	Linaceae
Plantago	Plantaginaceae
Polygonum, Rumex	Polygonaceae
Lysimachia	Primulaceae
Clematis (except **C. fremontii**)	Ranunculaceae
Agrimonia, Crateagus, Pyrus, Rubus	Rosaceae
Galium	Rubiaceae
Gratiola, Veronica	Scrophulariaceae
Physalis	Solanaceae
Vitis	Vitaceae

For essentially the same reasons, varieties and forms of species in which such exist in our area have not been included. This means that a description may apply **only** to the Missouri form or variety, though the title of the description is the species name without this qualification, e.g. **Smilax tamnoides** description belongs to **Smilax tamnoides** var. **hispida**.

This book does not include descriptions or pictures of large trees, many of which have tiny flowers and others of which produce their flowers at heights unattainable by the casual naturalist. Moreover, there are already in print two excellent paperbacks that concern themselves only with Missouri trees (C. Settergren and R. E. McDermott, **Trees of Missouri,** University of Missouri Agricultural Experiment Station, 1962; and Charles Laun, **A Pocket Guide to Missouri Trees,** Alsace Books and Films, 1976). Included, however, are both shrubs and understory trees that are, especially in the early spring, a dramatic element of our local flora.

The blooming periods have been carefully coordinated with Steyermark's notes as well as with personal experience in the field. However, there are times when you will find plants blooming earlier or later than during the months under which they are listed. This is due both to variations in the weather and to special microenvironments in which a few plants have found habitats that prolong their blooming periods over those of the majority of their species.

Acknowledgments

A number of people have helped put this book together, some contributing ideas for its format, some checking and rechecking the details involved, and others giving generously of their expertise. In the last group I owe particular thanks to those knowledgeable naturalists Arthur Christ and Edgar Denison, who have, each in his own way, generously shared their close acquaintance with the local flora.

The key has been adapted from the inventive scheme used by Lawrence Newcomb in a small paperback on the wildflowers of New England, and his recent excellent **Wildflower Guide.** The author is extremely grateful to Mr. Newcomb for permission to adapt his scheme for this book.

I want to thank David Ladd, Lawrence Dorr, Margie Glynn, Emily Norcross, Santi Plurad, Debra Stegman, Sylvia Steinert, Carol Taxman, and Helen Young, who have worked with me during two summers of field work and checking details; and in getting ready for publication I have had the staunch support of members of the Garden staff: Marshall Crosby, Barbara Pesch, Peter White, Maxine Franklin and Maburl Schober.

The majority of the illustrations have been taken from the second edition (1913) of **An Illustrated Flora of the Northern United States, Canada, and the British Possessions** by N L. Britton and A. Brown. Additional illustrations have been provided by Joni Duggins of the Missouri Botanical Garden staff, including those of the end pages and cover.

HOW TO USE THIS BOOK

1. Turn to the section (March-April, May-June, July-August, September-November) which includes the month you find the flower blooming.

2. Under that section find correct color section (white, yellow, orange, pink to red, violet to blue, green, brown).

3. Numbers in left hand column define leaves and flowers according to explanation below. (Numbers in right hand column indicate normal months of bloom.)

EXPLANATION OF NUMBERS

EXPLANATION of NUMBERS preceding plant names, under headings of time during which they first come into bloom, and color.

The first of the two digits refers to LEAVES, as follows:

No green leaves (this category includes plants that bloom before leafing out) 0

Basal leaves only (this category includes plants that also have involucres just below the inflorescence)

- leaves entire 1
- leaves toothed or shallowly lobed 2
- leaves deeply lobed or divided into leaflets 3

Stem leaves opposite or whorled (plants in this category may also have basal leaves, but the digit represents the shape of **stem** leaves only)

- leaves entire 4
- leaves toothed or shallowly lobed 5
- leaves deeply lobed or divided into leaflets 6

Stem leaves alternate (plants in this category may also have basal leaves, but the digit represents the shape of **stem** leaves only)

- leaves entire 7
- leaves toothed or shallowly lobed 8
- leaves deeply lobed or divided into leaflets 9

Note: Leaves with heart or arrow-shaped bases are keyed under 3, 6, or 9

The second of the two digits refers to FLOWERS, as follows:

Flowers so small as to be indistinguishable* 1

Flowers with petal-like parts dissimilar (irregular) 2

Flowers with petal-like parts similar, or nearly so (regular)**

- 3 petal-like parts or lobes 3
- 4 petal-like parts or lobes 4
- 5 petal-like parts or lobes 5
- 6 petal-like parts or lobes 6
- 7 more than 6 petal-like parts or lobes 7

4. Look up plants listed to which the key has led you. (Families to which they belong are listed on the right. In the text, if only two genera are listed for a family, or only two species for a genus, these are distinguished by italicizing the characteristics in which they differ. When more than two genera or species are described we have furnished a dichotomous key to help you tell them apart. Such keys are never completely satisfactory tools for even the most experienced botanists, but if you always read both alternatives before making a choice, your task will be easier.)

5. Plants marked with asterisks in the text are those which are not native but have been introduced into our area.

*All plants of the enormous "Composite" (see explanation, p. 100) family, the Asteraceae, as well as a number of plants in other families that have very small flowers, are included in this category.

Petal-like involucral bracts in such a plant as the "Flowering Dogwood," **Cornus florida, are keyed as "petal-like parts."

EXPLANATION OF COLOR CATEGORIES

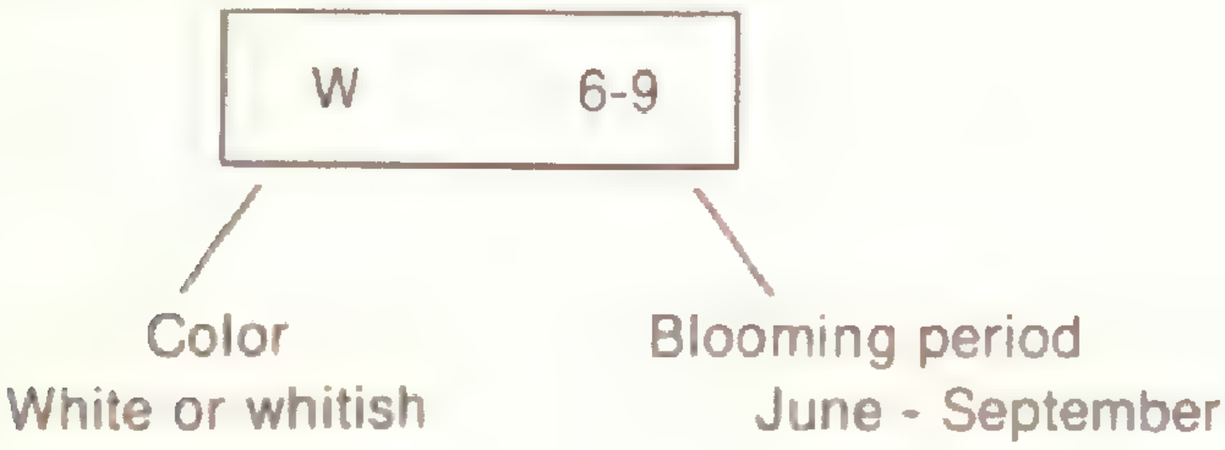
In many instances flower colors defy verbal definition. Thus some plants have been listed under two color headings. However, it is still recommended that you look, for instance, for "purple" flowers under both the "Pink-to-red" and "Violet-to-blue" categories, or "whitish" flowers under the "Green" or "Yellow" categories.

Colors have been limited to the following:

Brown	Br	Violet to blue	V, B
Green	G	White or whitish	W
Orange	O	Yellow	Y
Pink to red	P, R		

The rectangle with each species description contains flower color and blooming date information. Colors are coded according to the above scheme, and months are numbered 1 through 12.

Example:



INDEX OF BLOOMING PERIODS AND COLORS

March and April
- White or whitish . . . 10
- Yellow . . . 13
- Orange . . . 16
- Pink to red . . . 16
- Violet to blue . . . 18
- Green . . . 19
- Brown . . . 20

May and June
- White or whitish . . . 21
- Yellow . . . 27
- Orange . . . 31
- Pink to red . . . 31
- Violet to blue . . . 34
- Green . . . 37
- Brown . . . 39

July and August
- White or whitish . . . 40
- Yellow . . . 45
- Orange . . . 49
- Pink to red . . . 49
- Violet to blue . . . 52
- Green . . . 55
- Brown . . . 57

September to November
- White or whitish . . . 57
- Yellow . . . 61
- Orange . . . 64
- Pink to red . . . 64
- Violet to blue . . . 66
- Green . . . 69
- Brown . . . 70

White or whitish flowers

05.	Orobanche uniflora	4-6	Orobanchaceae
	Prunus americana	4-5	Rosaceae
11.	Plantago spp	4-11	Plantaginaceae
12.	Orchis spectabilis	4-6	Orchidaceae
15.	Androsace occidentalis	4-5	Primulaceae
	Dodecatheon meadia	4-6	Primulaceae
16.	Sisyrinchium campestre	4-6	Iridaceae
	Allium vineale	4-7	Liliaceae
	Camassia scilloides	3-5	Liliaceae
	Erythronium albidum	3-4	Liliaceae
	Nothoscordum bivalve	3-5 & 10-11	Liliaceae
	Ornithogalum umbellatum	4-6	Liliaceae
22.	Viola pallens	4-5	Violaceae
	V. soraria	3-5	Violaceae
24.	Draba verna	2-4	Brassicaceae
25.	Mitella diphylla	4-6	Saxifragaceae
	Saxifraga virginiensis	4-6	Saxifragaceae
27.	Linaria canadensis	4-9	Scrophulariaceae
31.	Erigenia bulbosa	2-4	Apiaceae
	Trifolium repens	4-10	Fabaceae
32.	Dicentra cucullaria	3-4	Fumariaceae
	D. canadensis	4-5	Fumariaceae
34.	Leavenworthia uniflora	3-4	Brassicaceae
35.	Anemonella thalictroides	3-6	Ranunculaceae
	Fragaria virginiana	4-5	Rosaceae
36.	Anemonella thalictroides	3-6	Ranunculaceae
	Hepatica nobilis	3-4	Ranunculaceae
37.	Sagina spp	3-8	Caryophyllaceae
	Sanguinaria canadensis	3-4	Papaveraceae
	Anemonella thalictroides	3-6	Ranunculaceae
	Hepatica nobilis	3-4	Ranunculaceae
41.	Cornus florida	3-5	Cornaceae
	Zanthoxylum americanum	4-5	Rutaceae
42.	Lonicera japonica	4-6	Caprifoliaceae
	Gratiola spp	4-10	Scrophulariaceae
43.	Trillium flexipes	4-5	Liliaceae
	T. nivale	3-4	Liliaceae

MARCH AND APRIL-White

44.	Sagina decumbens	3-8	Caryophyllaceae
	Cornus florida	3-5	Cornaceae
	Clematis fremontii	3-5	Ranunculaceae
	Galium spp	4-9	Rubiaceae
	Houstonia longifolia	4-7 & 10	Rubiaceae
45.	Arenaria serpyllifolia	4-8	Caryophyllaceae
	Cerastium spp	3-11	Caryophyllaceae
	Holosteum umbellatum	3-4	Caryophyllaceae
	Sagina decumbens	3-8	Caryophyllaceae
	Stellaria media	1-12	Caryophyllaceae
	Phlox pilosa	4-7 & 10-11	Polemoniaceae
	Claytonia virginica	2-5	Portulacaceae
	Zanthoxylum americanum	4-5	Rutaceae
	Bumelia lanuginosa	4-7	Sapotaceae
47.	Cerastium spp	3-11	Caryophyllaceae
	Stellaria media	1-12	Caryophyllaceae
52.	Monarda russeliana	4-6	Lamiaceae
	Collinsia verna	4-6	Scrophulariaceae
	Gratiola spp	4-10	Scrophulariaceae
54.	Veronica spp	3-8	Scrophulariaceae
55.	Viburnum prunifolium	4-5	Caprifoliaceae
	V. rufidulum	4-5	Caprifoliaceae
	Mitella diphylla	4-6	Saxifragaceae
	Penstemon pallidus	4-7	Scrophulariaceae
	Valerianella radiata	4-5	Valerianaceae
56.	Anemonella thalictroides	3-6	Ranunculaceae
64.	Sanicula gregaria	3-7	Apiaceae
	Dentaria laciniata	3-4	Brassicaceae
	Aesculus glabra	4-5	Hippocastanaceae
65.	Anemone virginiana	4-8	Ranunculaceae
	Anemonella thalictroides	3-6	Ranunculaceae
	Ribes missouriensis	3-5	Saxifragaceae
	Staphylea trifolia	3-4	Staphyleaceae
66.	Podophyllum peltatum	4-5	Berberidaceae
	Anemonella thalictroides	3-6	Ranunculaceae
67.	Podophyllum peltatum	4-5	Berberidaceae
	Anemonella thalictroides	3-6	Ranunculaceae
71.	Antennaria plantaginifolia	3-6	Asteraceae
72.	Viola rafinesquii	3-5	Violaceae

MARCH AND APRIL-White

74.	Arabis canadensis	4-6	Brassicaceae
	A. laevigata	3-6	Brassicaceae
	A. missouriensis	4-6	Brassicaceae
	A. shortii	4-6	Brassicaceae
	Capsella bursa-pastoris	1-12	Brassicaceae
	Cardamine bulbosa	3-6	Brassicaceae
	C. parviflora	3-7	Brassicaceae
	Draba brachycarpa	3-4	Brassicaceae
	D. verna	2-4	Brassicaceae
	Sibara virginica	3-5	Brassicaceae
	Thlaspi spp	3-4	Brassicaceae
75.	Cynoglossum virginianum	4-6	Boraginaceae
	Lithospermum arvense	4-6	Boraginaceae
	L. incisum	4-6	Boraginaceae
	Myosotis virginica	4-5	Boraginaceae
	Rhododendron roseum	4-5	Ericaceae
	Vaccinium stamineum	4-6	Ericaceae
	Comandra richardsiana	4-7	Santalaceae
	Bumelia lanuginosa	4-7	Sapotaceae
76.	Allium vineale	4-7	Liliaceae
	Polygonatum commutatum	4-6	Liliaceae
	Smilacina racemosa	4-6	Liliaceae
81.	Ilex decidua	4-5	Aquifoliaceae
	Erigeron philadelphicus	4-6	Asteraceae
	Parthenium hispidum	4-10	Asteraceae
	P. integrifolium	4-9	Asteraceae
	Carpinus caroliniana	4-5	Betulaceae
	Ostrya virginiana	3-5	Betulaceae
82.	Viola rafinesquii	3-5	Violaceae
	V. striata	3-6	Violaceae
84.	Arabis canadensis	4-6	Brassicaceae
	A. laevigata	3-6	Brassicaceae
	A. missouriensis	4-6	Brassicaceae
	A. shortii	4-6	Brassicaceae
	Capsella bursa-pastoris	1-12	Brassicaceae
	Draba cuneifolia	2-4	Brassicaceae
	Erysimum repandum	3-6	Brassicaceae
	Hesperis matronalis	4-6	Brassicaceae
	Lepidium campestre	4-9	Brassicaceae
	L. virginicum	2-11	Brassicaceae
	Thlaspi spp	3-4	Brassicaceae
85.	Amelanchier arborea	3-4	Rosaceae
	Crataegus spp	4-6	Rosaceae
	Prunus spp	3-5	Rosaceae

	P. munsoniana	3-5	Rosaceae
	P. serotina	4-5	Rosaceae
	Ribes missouriense	3-5	Saxifragaceae
	Solanum carolinense	4-10	Solanaceae
89.	Ilex decidua	4-5	Aquifoliaceae
91.	Chaerophyllum procumbens	3-6	Apiaceae
	Osmorhiza claytonii	4-6	Apiaceae
	O. longistylis	4-6	Apiaceae
	Sanicula gregaria	3-7	Apiaceae
	Achillea millefolium	4-11	Asteraceae
	Trifolium repens	4-10	Fabaceae
	Actaea pachypoda	4-6	Ranunculaceae
	Hydrastis canadensis	4-5	Ranunculaceae
92.	Astragalus mexicanus	3-5	Fabaceae
	Baptisia leucophaea	4-6	Fabaceae
	Vicia spp	4-9	Fabaceae
	Delphinium tricorne	4-6	Ranunculaceae
	Pedicularis canadensis	4-5	Scrophulariaceae
94.	Sanicula gregaria	3-7	Apiaceae
	Barbarea vulgaris	3-6	Brassicaceae
	Capsella bursa-pastoris	1-12	Brassicaceae
	Cardamine parviflora	3-7	Brassicaceae
	Leavenworthia uniflora	3-4	Brassicaceae
	Nasturtium officinale	4-10	Brassicaceae
	Sibara virginica	3-5 & 10-11	Brassicaceae
95.	Ellisia nyctelea	4-6	Hydrophyllaceae
	Hydrophyllum appendiculatum	4-7	Hydrophyllaceae
	H. canadense	4-7	Hydrophyllaceae
	H. virginianum	4-7	Hydrophyllaceae
	Phacelia gilioides	4-6	Hydrophyllaceae
	Actaea pachypoda	4-6	Ranunculaceae
	Isopyrum biternatum	3-5	Ranunculaceae
	Potentilla recta	4-8	Rosaceae
	P. simplex	4-6	Rosaceae
	Rubus spp	4-6	Rosaceae
96.	Caulophyllum thalictroides	3-5	Berberidaceae

Yellow flowers

01.	Alnus serrulata	2-4	Betulaceae
	Corylus americana	2-4	Betulaceae
	Forestiera acuminata	3-4	Oleaceae
02.	Corallorhiza wisteriana	2-6	Orchidaceae
04.	Hamamelis vernalis	1-4	Hamamelidaceae
	Dirca palustris	3-4	Thymeleaceae

MARCH AND APRIL-Yellow

05.	Rhus aromatica	3-4	Anacardiaceae
	Zanthoxylum americanum	4-5	Rutaceae
06.	Lindera benzoin	4-5	Lauraceae
	Sassafras albidum	4-5	Lauraceae
16.	Hypoxis hirsuta	4-5	Amaryllidaceae
	Erythronium americanum	3-5	Liliaceae
21.	Krigia dandelion	4-6	Asteraceae
31.	Taraxacum officinale	1-12	Asteraceae
41.	Coreopsis lanceolata	4-7	Asteraceae
42.	Lonicera flava	4-5	Caprifoliaceae
	Triosteum angustifolium	4-5	Caprifoliaceae
	T. perfoliatum	4-7	Caprifoliaceae
	Gratiola spp	4-10	Scrophulariaceae
45.	Lonicera flava	4-5	Caprifoliaceae
	Triosteum angustifolium	4-5	Caprifoliaceae
	Ranunculus harveyi	3-5	Ranunculaceae
62.	Pedicularis canadensis	4-5	Scrophulariaceae
64.	Aesculus glabra	4-5	Hippocastanaceae
	Stylophorum diphyllum	4-6	Papaveraceae
	Thalictrum dioicum	4-5	Ranunculaceae
71.	Coreopsis lanceolata	4-7	Asteraceae
	Tragopogon dubius	4-10	Asteraceae
	Lindera benzoin	4-5	Lauraceae
72.	Cypripedium calceolus	4-6	Orchidaceae
74.	Rorippa spp	4-10	Brassicaceae
	Dirca palustris	3-4	Thymeleaceae
75.	Lithospermum incisum	4-6	Boraginaceae
	Helianthemum bicknellii	4-6	Cistaceae
76.	Sassafras albidum	4-5	Lauraceae
	Smilax tamnoides	4-6	Liliaceae
	Uvularia grandiflora	3-4	Liliaceae
81.	Senecio aureus	4-6	Asteraceae
	S. obovatus	3-6	Asteraceae
	Alnus serrulata	4-5	Betulaceae
	Betula nigra	4-5	Betulaceae
	Carpinus caroliniana	4-5	Betulaceae
	Corylus americana	3-4	Betulaceae
	Ostrya virginiana	3-5	Betulaceae
82.	Viola pensylvanica	3-5	Violaceae
84.	Arabis missouriensis	4-6	Brassicaceae
	Draba brachycarpa	3-4	Brassicaceae
	Erysimum capitatum	4-7	Brassicaceae

	E. repandum	3-6	Brassicaceae
	Rorippa spp	4-10	Brassicaceae
	Rhamnus lanceolata	4-6	Rhamnaceae
85.	Ranunculus abortivus	3-6	Ranunculaceae
	R. harveyi	3-5	Ranunculaceae
	R. micranthus	3-5	Ranunculaceae
86.	Sassafras albidum	15	Lauraceae
91.	Pastinaca sativa	4-10	Apiaceae
	Polytaenia nuttallii	4-6	Apiaceae
	Sanicula gregaria	3-7	Apiaceae
	Taenidia integerrima	4-7	Apiaceae
	Thaspium barbinode	4-6	Apiaceae
	T. trifoliatum	4-6	Apiaceae
	Zizia aptera	4-6	Apiaceae
	Z. aurea	4-6	Apiaceae
	Senecio aureus	4-6	Asteraceae
	S. glabellus	4-6	Asteraceae
	S. obovatus	3-6	Asteraceae
	S. plattensis	4-6	Asteraceae
	Medicago lupulina	2-12	Fabaceae
	Trifolium campestre	4-9	Fabaceae
92.	Astragalus mexicanus	3-5	Fabaceae
	Medicago lupulina	2-12	Fabaceae
	Trifolium dubium	4-10	Fabaceae
	Corydalis flavula	3-4	Fumariaceae
	Pedicularis canadensis	4-5	Scrophulariaceae
94.	Barbarea vulgaris	3-6	Brassicaceae
	Brassica spp	4-10	Brassicaceae
	Descurainea pinnata	4-5	Brassicaceae
	Rorippa spp	4-10	Brassicaceae
	Sisymbrium altissimum	4-5	Brassicaceae
	Zanthoxylum americanum	4-5	Rutaceae
95.	Taenidia integerrima	4-7	Apiaceae
	Oxalis stricta	3-10	Oxalidaceae
	Ranunculus abortivus	3-6	Ranunculaceae
	R. fascicularis	3-5	Ranunculaceae
	R. harveyi	3-5	Ranunculaceae
	R. hispidus	3-6	Ranunculaceae
	R. micranthus	3-5	Ranunculaceae
	R. sceleratus	4-8	Ranunculaceae
	R. septentrionalis	4-6	Ranunculaceae
	Geum vernum	4-6	Rosaceae
	Potentilla recta	4-8	Rosaceae
	P. simplex	4-6	Rosaceae
	Zanthoxylum americanum	4-5	Rutaceae
96.	Caulophyllum thalictroides	3-5	Berberidaceae
97.	Geum vernum	4-6	Rosaceae

MARCH AND APRIL-Orange to Pink to Red

Orange flowers

04.	Hamamelis vernalis	1-4	Hamamelidaceae
71.	Krigia biflora	4-8	Asteraceae
	Lithospermum canescens	4-6	Boraginaceae
75.	Lithospermum canescens	4-6	Boraginaceae
81.	Krigia biflora	4-8	Asteraceae
84.	Erysimum capitatum	4-6	Brassicaceae
	Hamamelis vernalis	1-4	Hamamelidaceae

Pink to Red flowers

01.	Corylus americana	2-4	Betulaceae
02.	Cercis canadensis	3-4	Fabaceae
	Corallhoriza wisteriana	2-6	Orchidaceae
03.	Asimina triloba	3-5	Annonaceae
04.	Hamamelis vernalis	1-4	Hamamelidaceae
11.	Antennaria plantaginifolia	3-6	Asteraceae
12.	Orchis spectabilis	2-6	Orchidaceae
13.	Asarum canadense	4-5	Aristolochiaceae
15.	Dodecatheon meadia	4-6	Primulaceae
16.	Allium mutabile	4-6	Liliaceae
	A. vineale	4-7	Liliaceae
31.	Trifolium pratense	4-9	Fabaceae
35.	Oxalis violacea	3-7 & 9-11	Oxalidaceae
	Anemonella thalictroides	3-6	Ranunculaceae
36.	Hepatica nobilis	3-4	Ranunculaceae
	Anemonella thalictroides	3-6	Ranunculaceae
37.	Hepatica nobilis	3-4	Ranunculaceae
	Anemonella thalictroides	3-6	Ranunculaceae
41.	Cornus florida	3-5	Cornaceae
42.	Triosteum aurantiacum	4-7	Caprifoliaceae
	T. perfoliatum	4-7	Caprifoliaceae
43.	Trillium recurvatum	3-5	Liliaceae
	T. viride	3-5	Liliaceae
44.	Houstonia minima	1-4	Rubiaceae
45.	Silene antirrhina	4-9	Caryophyllaceae
	S. virginica	4-6	Caryophyllaceae

MARCH AND APRIL-Pink to Red

	Phlox pilosa	4-7 & 10-11	Polemoniaceae
	Claytonia virginica	2-5	Portulacaceae
51.	Betula nigra	4-5	Betulaceae
52.	Lamium amplexicaule	2-11	Lamiaceae
	L. purpureum	3-10	Lamiaceae
	Monarda russeliana	4-6	Lamiaceae
54.	Euonymus atropurpureus	4-6	Celastraceae
62.	Pedicularis canadensis	4-5	Scrophulariaceae
64.	Dentaria laciniata	4-6	Brassicaceae
65.	Geranium maculatum	4-6	Geraniaceae
	Anemonella thalictroides	3-6	Ranunculaceae
	Verbena canadensis	3-11	Verbenaceae
66.	Anemonella thalictroides	3-6	Ranunculaceae
67.	Anemonella thalictroides	3-6	Ranunculaceae
71.	Antennaria plantaginifolia	3-6	Asteraceae
	Erigeron pulchellus	4-6	Asteraceae
	Rumex spp	4-9	Polygonaceae
72.	Cercis canadensis	3-4	Fabaceae
73.	Asimina triloba	3-5	Annonaceae
	Tradescantia longipes	4-5	Commelinaceae
	T. virginiana	4-6	Commelinaceae
75.	Mertensia virginica	3-4	Boraginaceae
	Rhododendron roseum	4-5	Ericaceae
	Vaccinium vacillans	4-5	Ericaceae
76.	Allium vineale	4-7	Liliaceae
81.	Erigeron philadelphicus	4-6	Asteraceae
	E. pulchellus	4-6	Asteraceae
	Carpinus caroliniana	4-5	Betulaceae
	Corylus americana	2-4	Betulaceae
	Rumex spp	4-9	Polygonaceae
84.	Hesperis matronalis	4-6	Brassicaceae
	Hamamelis vernalis	1-4	Hamamelidaceae
85.	Specularia perfoliata	4-8	Campanulaceae
	Pyrus coronaria	3-4	Rosaceae
	P. ioensis	3-4	Rosaceae
91.	Rumex spp	4-9	Polygonaceae
	Castilleja coccinea	3-7	Scrophulariaceae
92.	Vicia spp	4-10	Fabaceae
	Castilleja coccinea	3-7	Scrophulariaceae
	Pedicularis canadensis	4-5	Scrophulariaceae

95.	Aquilegia canadensis	4-7	Ranunculaceae

Violet to Blue flowers

05.	Orobanche uniflora	4-6	Orobanchaceae
16.	Sisyrinchium campestre	4-6	Iridaceae
	Camassia scilloides	3-5	Liliaceae
22.	Psoralea esculenta	4-7	Fabaceae
	Viola missouriensis	3-5	Violaceae
	V. papilionacea	3-6 & 10-11	Violaceae
	V. sagittata	4-6	Violaceae
	V. sororia	3-6	Violaceae
25.	Viola missouriensis	3-5	Violaceae
	V. papilionacea	3-6 & 9-11	Violaceae
	V. sagittata	4-6	Violaceae
32.	Viola pedata	3-6 & 9-11	Violaceae
	V. triloba	4-5	Violaceae
35.	Oxalis violacea	3-7 & 9-11	Oxalidaceae
	Viola triloba	4-5	Violaceae
37.	Hepatica nobilis	3-4	Ranunculaceae
37.	Hepatica nobilis	3-4	Ranunculaceae
42.	Triosteum perfoliatum	4-7	Caprifoliaceae
	Astragalus distortus	4-6	Fabaceae
43.	Trillium recurvatum	4-5	Liliaceae
	T. viride	4-5	Liliaceae
44.	Houstonia minima	1-4	Rubiaceae
45.	Vinca minor	4-5	Apocynaceae
	Phlox divaricata	3-6	Polemoniaceae
	P. pilosa	4-7 & 10-11	Polemoniaceae
52.	Glechoma hederacea	3-7	Lamiaceae
	Lamium amplexicaule	2-11	Lamiaceae
	L. purpureum	3-10	Lamiaceae
	Monarda russeliana	4-6	Lamiaceae
	Collinsia verna	4-6	Scrophulariaceae
	Veronica spp	3-8	Scrophulariaceae
54.	Euonymus atropurpureus	4-6	Celastraceae
55.	Mitella diphylla	4-6	Lamiaceae
62.	Salvia lyrata	4-6	Lamiaceae
65.	Verbena canadensis	3-11	Verbenaceae
66.	Caulophyllum thalictroides	3-5	Berberidaceae

MARCH AND APRIL-Violet to Blue to Green

71.	Erigeron pulchellus	4-6	Asteraceae
72.	Nemastylis geminiflora	4-5	Iridaceae
	Linaria canadensis	4-9	Scrophulariaceae
	Viola rafinesquii	3-5	Violaceae
73.	Tradescantia longipes	4-5	Commelinaceae
	T. virginiana	4-6	Commelinaceae
75.	Amsonia illustris	4-5	Apocynaceae
	A. tabernaemontana	4-5	Apocynaceae
	Cynoglossum virginianum	4-6	Boraginaceae
	Mertensia virginica	3-4	Boraginaceae
	Myosotis virginica	4-5	Boraginaceae
76.	Nemastylis geminiflora	4-5	Iridaceae
82.	Viola rafinesquii	3-5	Violaceae
85.	Specularia biflora	4-6	Campanulaceae
	S. perfoliata	4-8	Campanulaceae
	Hydrophyllum appendiculatum	4-7	Hydrophyllaceae
91.	Psoralea esculenta	4-7	Fabaceae
92.	Baptisia asutralis	4-6	Fabaceae
	Vicia spp	4-10	Fabaceae
	Delphinium tricorne	3-6	Ranunculaceae
95.	Ellisea nyctelea	4-6	Hydrophyllaceae
	Hydrophyllum appendiculatum	4-7	Hydrophyllaceae
	H. virginianum	4-7	Hydrophyllaceae
	Phacelia gilioides	4-6	Hydrophyllaceae
	P. purshii	4-6	Hydrophyllaceae
	Polemonium reptans	3-4	Polemoniaceae

Green flowers

02.	Corallorhiza wisteriana	2-6	Orchidaceae
05.	Zanthoxylum americanum	4-5	Rutaceae
11.	Plantago spp	4-11	Plantaginaceae
	Myosurus minimus	3-5	Ranunculaceae
15.	Androsace occidentalis	3-5	Primulaceae
	Myosurus minimus	3-5	Ranunculaceae
21.	Plantago spp	4-11	Plantaginaceae
25.	Heuchera americana	4-6	Saxifragaceae
	H. richardsonii	4-7	Saxifragaceae
	Saxifraga pensylvanica	4-6	Saxifragaceae
31.	Arisaema atrorubens	4-6	Araceae
	A. dracontium	4-6	Araceae

MARCH AND APRIL-Green to Brown

41.	Dioscorea villosa	4-6	Dioscoreaceae
42.	Triosteum angustifolium	4-5	Caprifoliaceae
43.	Trillium viride	3-5	Liliaceae
44.	Galium spp	4-9	Rubiaceae
45.	Androsace occidentalis	3-5	Primulaceae
55.	Mitella diphylla	4-6	Saxifragaceae
64.	Sanicula gregaria	3-7	Apiaceae
65.	Anemone virginiana	4-8	Ranunculaceae
71.	Euphorbia commutata	3-6	Euphorbiaceae
	Rumex spp	4-9	Polygonaceae
75.	Vaccinium vacillans	4-5	Ericaceae
	Hybanthus concolor	3-6	Violaceae
76.	Dioscorea villosa	4-6	Dioscoreaceae
	Allium vineale	4-7	Liliaceae
	Polygonatum commutatum	4-6	Liliaceae
	Smilax tamnoides	4-6	Liliaceae
81.	Ostrya virginiana	3-5	Betulaceae
	Rumex spp	4-9	Polygonaceae
85.	Heuchera americana	4-6	Saxifragaceae
	H. richardsonii	4-7	Saxifragaceae
91.	Sanicula gregaria	3-7	Apiaceae
	Rumex spp	4-9	Polygonaceae
94.	Sanicula gregaria	3-7	Apiaceae
	Descurainea pinnata	4-5	Brassicaeae
	Ptelea trifoliata	4-6	Rutaceae
	Zanthoxylum americanum	4-5	Rutaceae
95.	Ptelea trifoliata	4-6	Rutaceae
	Zanthoxylum americanum	4-5	Rutaceae
96.	Caulophyllum thalictroides	3-5	Berberidaceae

Brown flowers

03.	Asimina triloba	3-5	Annonaceae
13.	Asarum canadense	4-5	Aristolochiaceae
42.	Triosteum perfoliatum	4-7	Caprifoliaceae
73.	Asimina triloba	3-5	Annonaceae

White or whitish flowers

05.	Orobanche uniflora	4-6	Orobanchaceae
	Prunus americana	4-5	Rosaceae
11.	Plantago spp	4-11	Plantaginaceae
12.	Orchis spectabilis	4-6	Orchidaceae
13.	Alisma plantago-aquatica	5-9	Alismataceae
	Echinodorus cordifolius	6-9	Alismataceae
	Sagittaria engelmanniana	6-9	Alismataceae
	S. latifolia	6-9	Alismataceae
	S. montevidensis	6-9	Alismataceae
15.	Talinum parviflorum	5-8	Portulacaceae
	Androsace occidentalis	4-5	Primulaceae
	Dodecatheon meadia	4-6	Primulaceae
16.	Sisyrinchium albidum	5-6	Iridaceae
	S. campestre	4-6	Iridaceae
	Allium vineale	4-7	Liliaceae
	Camassia scilloides	3-5	Liliaceae
	Nothoscordum bivalve	3-5 & 10-11	Liliaceae
	Ornithogalum umbellatum	4-6	Liliaceae
	Yucca smalliana	5-8	Liliaceae
	Heteranthera limosa	6-9	Pontederiaceae
22.	Viola pallens	4-5	Violaceae
	V. soraria	3-5	Violaceae
25.	Mitella diphylla	4-6	Saxifragaceae
	Saxifraga virginiensis	4-6	Saxifragaceae
27.	Linaria canadensis	4-9	Scrophulariaceae
31.	Trifolium repens	4-10	Fabaceae
32.	Dicentra canadensis	4-5	Fumariaceae
35.	Anemonella thalictroides	3-6	Ranunculaceae
	Fragaria virginiana	4-5	Rosaceae
36.	Anemonella thalictroides	3-6	Ranunculaceae
37.	Sagina spp	3-8	Caryophyllaceae
	Anemonella thalictroides	3-6	Ranunculaceae
41.	Froelichia gracilis	5-9	Amaranthaceae
	Cornus florida	3-5	Cornaceae
	Euphorbia supina	5-10	Euphorbiaceae
	Rotala ramosior	6-10	Lythraceae
	Polygala verticillata	5-10	Polygalaceae
	Zanthoxylum americanum	4-5	Rutaceae

42.	Justicia americana	5-10	Acanthaceae
	Lonicera japonica	4-6	Caprifoliaceae
	Pycnanthemum tenulfolium	6-9	Lamiaceae
	Gratiola spp	4-10	Scrophulariaceae
43.	Trillium flexipes	4-5	Liliaceae
44.	Justicia americana	5-10	Acanthaceae
	Sagina decumbens	3-8	Caryophyllaceae
	Cornus drummondii	5-6	Cornaceae
	C. florida	3-5	Cornaceae
	C. obliqua	5-7	Cornaceae
	C. racemosa	5-7	Cornaceae
	Swertia caroliniensis	5-6	Gentianaceae
	Clematis fremontii	3-5	Ranunculaceae
	Cephalanthus occidentalis	6-8	Rubiaceae
	Diodia teres	6-10	Rubiaceae
	Galium spp	4-9	Rubiaceae
	Houstonia longifolia	4-7 & 10	Rubiaceae
	H. nigricans	5-10	Rubiaceae
	Mitchella repens	5-7	Rubiaceae
	Spermacoce glabra	6-10	Rubiaceae
45.	Mollugo verticillata	5-11	Aizoaceae
	Apocynum cannabinum	5-8	Apocynaceae
	Asclepias hirtella	5-8	Asclepiadaceae
	A. incarnata	6-8	Asclepiadaceae
	A. quadrifolia	5-7	Asclepiadaceae
	A. verticillata	5-9	Asclepiadaceae
	Arenaria serpyllifolia	4-8	Caryophyllaceae
	A. stricta	5-7	Caryophyllaceae
	Cerastium spp	3-11	Caryophyllaceae
	Sagina decumbens	3-8	Caryophyllaceae
	Saponaria officinalis	5-10	Caryophyllaceae
	Silene stellata	5-9	Caryophyllaceae
	Stellaria media	1-12	Caryophyllaceae
	Euphorbia corollata	5-10	Euphorbiaceae
	Phlox pilosa	4-7 & 10-11	Polemoniaceae
	Claytonia virginica	2-5	Portulacaceae
	Zanthoxylum americanum	4-5	Rutaceae
	Bumelia lanuginosa	4-7	Sapotaceae
	Lindernia anagallidea	6-10	Scrophulariaceae
47.	Cerastium spp	3-11	Caryophyllaceae
	Stellaria media	1-12	Caryophyllaceae
51.	Galinsoga ciliata	5-11	Asteraceae
	Euphorbia maculata	5-10	Euphorbiaceae
	E. cupina	5-10	Euphorbiaceae
	Lycopus spp	6-10	Lamiaceae
	Hydrangea arborescens	5-7	Saxifragaceae
	Veronicastrum virginiana	6-9	Scrophulariaceae

52.	Blephilia cilliata	5-8	Lamiaceae
	Lycopus spp	6-10	Lamiaceae
	Marrubium vulgare	5-9	Lamiaceae
	Monarda russeliana	4-6	Lamiaceae
	Scutellaria lateriflora	6-10	Lamiaceae
	Collinsia verna	4-6	Scrophulariaceae
	Gratiola spp	4-10	Scrophulariaceae
	Penstemon digitalis	5-7	Scrophulariaceae
54.	Circaea quadrisulcata	6-8	Onagraceae
	Veronica spp	3-8	Scrophulariaceae
55.	Viburnum prunifolium	4-5	Caprifoliaceae
	V. rufidulum	4-5	Caprifoliaceae
	Mitella diphylla	4-6	Saxifragaceae
	Lindernia anagallidea	6-10	Scrophulariaceae
	Penstemon pallidus	4-7	Scrophulariaceae
	Valerianella radiata	4-5	Valerianaceae
	Verbena urticifolia	6-10	Verbenaceae
56.	Anemonella thalictroides	3-6	Ranunculaceae
61.	Polymnia canadensis	5-10	Asteraceae
62.	Conobea multifida	5-10	Scrophulariaceae
64.	Sanicula gregaria	3-7	Apiaceae
	Aesculus glabra	4-5	Hippocastanaceae
65.	Panax quinquefolius	6-7	Araliaceae
	Sambucus canadensis	5-7	Caprifoliaceae
	Anemone canadensis	5-7	Ranunculaceae
	A. virginiana	4-8	Ranunculaceae
	Anemonella thalictroides	3-6	Ranunculaceae
	Ribes missouriensis	3-5	Saxifragaceae
66.	Podophyllum peltatum	4-5	Berberidaceae
	Anemonella thalictroides	3-6	Ranunculaceae
67.	Podophyllum peltatum	4-5	Berberidaceae
	Anemonella thalictroides	3-6	Ranunculaceae
71.	Antennaria plantaginifolia	3-6	Asteraceae
	Cacalia tuberosa	5-8	Asteraceae
	Erigeron canadensis	6-11	Asteraceae
	E. strigosus	5-9	Asteraceae
	Polygonum spp	5-11	Polygonaceae
	Saururus cernuus	5-9	Saururaceae
72.	Viola rafinesquii	3-5	Violaceae
74.	Arabis canadensis	4-6	Brassicaceae
	A. laevigata	3-6	Brassicaceae
	A. missouriensis	4-6	Brassicaceae
	A. shortii	4-6	Brassicaceae
	Capsella bursa-pastoris	1-12	Brassicaceae

	Cardamine bulbosa	3-6	Brassicaceae
	C. parviflora	3-7	Brassicaceae
	Sibara virginica	3-5	Brassicaceae
	Cornus alternifolia	5-7	Cornaceae
	Gaura biennis	6-10	Onagraceae
	Spermacoce glabra	6-10	Rubiaceae
75.	Cynoglossum officinale	5-7	Boraginaceae
	C. virginianum	4-6	Boraginaceae
	Heliotropium tenellum	6-8	Boraginaceae
	Lithospermum arvense	4-6	Boraginaceae
	L. incisum	4-6	Boraginaceae
	Myosotis virginica	4-5	Boraginaceae
	Onosmodium spp	5-7	Boraginaceae
	Convolvulus arvensis	5-9	Convolvulaceae
	C. sepium	5-9	Convolvulaceae
	Ipomoea pandurata	5-9	Convolvulaceae
	Rhododendron roseum	4-5	Ericaceae
	Vaccinium arboreum	5-6	Ericaceae
	V. stamineum	4-6	Ericaceae
	Euphorbia corollata	5-10	Euphorbiaceae
	Phytolacca americana	5-10	Phytolaccaceae
	Comandra richardsiana	4-7	Santalaceae
	Bumelia lanuginosa	4-7	Sapotaceae
	Solanum americanum	5-9	Solanaceae
76.	Allium vineale	4-7	Liliaceae
	Polygonatum commutatum	4-6	Liliaceae
	Smilacina racemosa	4-6	Liliaceae
	Menispermum canadense	5-7	Menispermaceae
	Heteranthera limosa	6-9	Pontederiaceae
81.	Ilex decidua	4-5	Aquifoliaceae
	Cacalia atriplicifolia	6-10	Asteraceae
	C. muhlenbergii	5-10	Asteraceae
	C. tuberosa	5-8	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Erigeron annuus	5-11	Asteraceae
	E. canadensis	6-11	Asteraceae
	E. philadelphicus	4-6	Asteraceae
	E. strigosus	5-9	Asteraceae
	Parthenium hispidum	4-10	Asteraceae
	P. integrifolium	4-9	Asteraceae
	Carpinus caroliniana	4-5	Betulaceae
	Ostrya virginiana	3-5	Betulaceae
	Laportea canadensis	5-8	Urticaceae
82.	Lobelia inflata	6-10	Campanulaceae
	L. spicata	5-8	Campanulaceae
	Marrubium vulgare	5-9	Lamiaceae
	Viola rafinesquii	3-5	Violaceae
	V. striata	3-6	Violaceae

84.	Arabis canadensis	4-6	Brassicaceae
	A. laevigata	3-6	Brassicaceae
	A. missouriensis	4-6	Brassicaceae
	A. shortii	4-6	Brassicaceae
	Capsella bursa-pastoris	1-12	Brassicaceae
	Erysimum repandum	3-6	Brassicaceae
	Hesperis matronalis	4-6	Brassicaceae
	Iodanthus pinnatifidus	5-6	Brassicaceae
	Lepidium campestre	4-9	Brassicaceae
	L. virginicum	2-11	Brassicaceae
	Gaura biennis	6-10	Onagraceae
	Oenothera speciosa	5-7	Onagraceae
85.	Celastrus scandens	5-6	Celastraceae
	Vaccinium arboreum	5-6	Ericaceae
	Hydrophyllum canadense	5-7	Hydrophyllaceae
	Ceanothus americanus	5-11	Rhamnaceae
	Crataegus spp	4-6	Rosaceae
	Physocarpus opulifolius	5-6	Rosaceae
	Prunus spp	3-5	Rosaceae
	P. munsoniana	3-5	Rosaceae
	P. serotina	4-5	Rosaceae
	Ribes missouriense	3-5	Saxifragaceae
	Verbascum blattaria	5-9	Scrophulariaceae
	Datura stramonium	5-10	Solanaceae
	Solanum americanum	5-11	Solanaceae
	S. carolinense	4-10	Solanaceae
	Ampelopsis cordata	5-7	Vitaceae
86.	Menispermum canadense	5-7	Menispermaceae
89.	Ilex decidua	4-5	Aquifoliaceae
91.	Chaerophyllum procumbens	3-6	Apiaceae
	Cicuta maculata	5-9	Apiaceae
	Conium maculatum	5-8	Apiaceae
	Cryptotaenia canadensis	5-8	Apiaceae
	Daucus carota	5-10	Apiaceae
	Osmorhiza claytonii	4-6	Apiaceae
	O. longistylis	4-6	Apiaceae
	Sanicula canadensis	5-7	Apiaceae
	S. gregaria	3-7	Apiaceae
	Torilis japonica	6-8	Apiaceae
	Aralia racemosa	6-8	Araliaceae
	Achillea millefolium	4-11	Asteraceae
	Anthemis cotula	5-11	Asteraceae
	Carduus nutans	5-10	Asteraceae
	Chrysanthemum leucanthemum	5-10	Asteraceae
	Matricaria chamomilla	5-10	Asteraceae
	Polymnia canadensis	5-10	Asteraceae
	Desmanthus illinoensis	6-8	Fabaceae
	Petalostemum candidum	5-9	Fabaceae

	Psoralea onobrychis	5-9	Fabaceae
	Strophostyles spp	6-10	Fabaceae
	Trifolium pratense	5-9	Fabaceae
	T. reflexum	5-8	Fabaceae
	T. repens	4-10	Fabaceae
	Actaea pachypoda	4-6	Ranunculaceae
	Cimicifuga racemosa	5-8	Ranunculaceae
	Hydrastis canadensis	4-5	Ranunculaceae
	Thalictrum revolutum	5-7	Ranunculaceae
92.	Astragalus canadensis	5-8	Fabaceae
	A. mexicanus	3-5	Fabaceae
	Baptisia leucophaea	4-6	Fabaceae
	B. leucantha	5-7	Fabaceae
	Coronilla varia	5-8	Fabaceae
	Desmodium spp	6-10	Fabaceae
	Lespedeza spp	5-10	Fabaceae
	Melilotus albus	5-10	Fabaceae
	Vicia spp	4-9	Fabaceae
	Delphinium tricorne	3-6	Ranunculaceae
	Pedicularis canadensis	4-5	Scrophulariaceae
94.	Sanicula gregaria	3-7	Apiaceae
	Barbarea vulgaris	3-6	Brassicaceae
	Capsella bursa-pastoris	1-12	Brassicaceae
	Cardamine parviflora	3-7	Brassicaceae
	Iodanthus pinnatifidus	5-6	Brassicaceae
	Nasturtium officinale	4-10	Brassicaceae
	Sibara virginica	3-5 & 10-11	Brassicaceae
	Polanisia dodecandra	5-10	Capparidaceae
	Clematis spp	5-9	Ranunculaceae
95.	Rhus copallina	5-11	Anacardiaceae
	Aralia racemosa	6-8	Araliaceae
	Onosmodium spp	5-7	Boraginaceae
	Ellisa nyctelea	4-6	Hydrophyllaceae
	Hydrophyllum appendiculatum	4-7	Hydrophyllaceae
	H. canadense	4-7	Hydrophyllaceae
	H. virginianum	4-7	Hydrophyllaceae
	Phacelia gilioides	4-6	Hydrophyllaceae
	Actaea pachypoda	4-6	Ranunculaceae
	Isopyrum biternatum	3-5	Ranunculaceae
	Aruncus dioicus	5-6	Rosaceae
	Geum canadense	5-11	Rosaceae
	Gillenia stipulata	5-7	Rosaceae
	Potentilla recta	4-8	Rosaceae
	P. simplex	4-6	Rosaceae
	Rosa setigera	5-7	Rosaceae
	Rubus spp	4-6	Rosaceae
96.	Caulophyllum thalictroides	3-5	Berberidaceae

97.	Passiflora incarnata	6-9	Passifloraceae
	Thalictrum revolutum	5-7	Ranunculaceae

Yellow flowers

02.	Corallorhiza wisteriana	2-6	Orchidaceae
05.	Zanthoxylum americanum	4-5	Rutaceae
06.	Lindera benzoin	4-5	Lauraceae
	Sassafras albidum	4-5	Lauraceae
07.	Opuntia compressa	5-7	Cactaceae
11.	Acorus calamus	5-7	Araceae
16.	Agave virginica	6-8	Amaryllidaceae
	Hypoxis hirsuta	4-5	Amaryllidaceae
	Erythronium americanum	3-5	Liliaceae
	Heteranthera dubia	6-10	Pontederiaceae
17.	Nelumbo lutea	6-9	Nymphaeaceae
	Nuphar luteum	6-10	Nymphaeaceae
21.	Krigia dandelion	4-6	Asteraceae
	K. virginica	5-8	Asteraceae
31.	Taraxacum officinale	1-12	Asteraceae
41.	Coreopsis lanceolata	4-7	Asteraceae
	C. pubescens	5-10	Asteraceae
42.	Lonicera flava	4-5	Caprifoliaceae
	Triosteum angustifolium	4-5	Caprifoliaceae
	T. perfoliatum	4-7	Caprifoliaceae
	Isotria verticillata	5	Orchidaceae
	Gratiola spp	4-10	Scrophulariaceae
44.	Ascyrum hypericoides	5-10	Hypericaceae
45.	Lonicera flava	4-5	Caprifoliaceae
	Triosteum angustifolium	4-5	Caprifoliaceae
	Hypericum drummondii	6-9	Hypericaceae
	H. perforatum	5-9	Hypericaceae
	H. punctatum	6-9	Hypericaceae
	H. spathulatum	6-9	Hypericaceae
	H. sphaerocarpum	5-9	Hypericaceae
	Linum spp	5-9	Linaceae
	Lysimachia spp	5-9	Primulaceae
	Ranunculus harveyi	3-5	Ranunculaceae
	Seymeria macrophylla	6-9	Scrophulariaceae
51.	Heliopsis helianthoides	5-9	Asteraceae
55.	Mentzelia oligosperma	5-9	Loasaceae
	Abutilon theophrasti	6-10	Malvaceae
	Gerardia flava	6-9	Scrophulariaceae

MAY AND JUNE-Yellow

61.	Coreopsis palmata	5-6	Asteraceae
	C. pubescens	5-10	Asteraceae
	Matricaria matricarioides	5-10	Asteraceae
62.	Pedicularis canadensis	4-5	Scrophulariaceae
64.	Aesculus glabra	4-5	Hippocastanaceae
	Stylophorum diphyllum	4-6	Papaveraceae
	Thalictrum dioicum	4-5	Ranunculaceae
65.	Seymeria macrophylla	6-9	Scrophulariaceae
71.	Chrysopsis villosa	6-10	Asteraceae
	Coreopsis lanceolata	4-7	Asteraceae
	Helenium amarum	6-11	Asteraceae
	H. flexuosum	6-11	Asteraceae
	Hieracium gronovii	5-10	Asteraceae
	H. scabrum	6-9	Asteraceae
	Rudbeckia missouriensis	6-10	Asteraceae
	Solidago nemoralis	6-11	Asteraceae
	S. petiolaris	5-11	Asteraceae
	Sonchus asper	5-10	Asteraceae
	S. oleraceus	6-10	Asteraceae
	Tragopogon dubius	4-10	Asteraceae
	Lindera benzoin	4-5	Lauraceae
72.	Crotalaria sagittalis	5-9	Fabaceae
	Cypripedium calceolus	4-6	Orchidaceae
	Kichxia elatine	5-10	Scrophulariaceae
	Linaria vulgaris	5-11	Scrophulariaceae
74.	Rorippa spp	4-10	Brassicaceae
	Diospyros virginiana	5-6	Ebenaceae
	Ludwigia alternifolia	6-8	Onagraceae
	Oenothera linifolia	5-7	Onagraceae
	O. missouriensis	5-8	Onagraceae
75.	Asclepias tuberosa	5-10	Asclepiadaceae
	Lithospermum incisum	4-6	Boraginaceae
	Helianthemum biknellii	4-6	Cistaceae
	Linum spp	5-9	Linaceae
	Abutilon theophrasti	6-10	Malvaceae
	Ludwigia peploides	5-10	Onagraceae
	Portulaca oleracea	6-11	Portulacaceae
	Verbascum thapsus	5-9	Scrophulariaceae
76.	Sassafras albidum	4-5	Lauraceae
	Smilax tamnoides	4-6	Liliaceae
	Heteranthera dubia	6-10	Pontederiaceae
77.	Passiflora lutea	6-9	Passifloraceae
81.	Grindelia lanceolata	6-10	Asteraceae
	Helenium flexuosum	6-11	Asteraceae
	Helianthus annuus	6-11	Asteraceae

	Lactuca scariola	6-10	Asteraceae
	Pyrrhopappus carolinianus	5-10	Asteraceae
	Rudbeckia hirta	5-9	Asteraceae
	R. triloba	6-11	Asteraceae
	Senecio aureus	4-6	Asteraceae
	S. obovatus	3-6	Asteraceae
	S. plattensis	5-6	Asteraceae
	Solidago petiolaris	5-11	Asteraceae
	Sonchus asper	5-10	Asteraceae
	S. oleraceus	6-10	Asteraceae
	Verbesina helianthoides	5-10	Asteraceae
	Alnus serrulata	4-5	Betulaceae
	Betula nigra	4-5	Betulaceae
	Carpinus caroliniana	4-5	Betulaceae
	Ostrya virginiana	3-5	Betulaceae
82.	Impatiens pallida	5-10	Balsaminaceae
	Kichxia elatine	5-10	Scrophulariaceae
	Viola pensylvanica	3-5	Violaceae
84.	Arabis missouriensis	4-6	Brassicaceae
	Erysimum capitatum	4-7	Brassicaceae
	E. repandum	3-6	Brassicaceae
	Rorippa spp	4-10	Brassicaceae
	Ludwigia alternifolia	6-8	Onagraceae
	Oenothera biennis	6-10	Onagraceae
	O. missouriensis	5-8	Onagraceae
	Rhamnus lanceolata	4-6	Rhamnaceae
85.	Cucurbita foetidissima	6-7	Cucurbitaceae
	Mentzelia oligosperma	5-9	Loasaceae
	Sida spinosa	6-10	Malvaceae
	Ranunculus abortivus	3-6	Ranunculaceae
	R. harveyi	3-5	Ranunculaceae
	R. micranthus	3-5	Ranunculaceae
	Rhamnus caroliniana	5-6	Rhamnaceae
	Verbascum blattaria	5-9	Scrophulariaceae
	V. thapsus	5-9	Scrophulariaceae
	Physalis spp	5-9	Solanaceae
	Solanum rostratum	5-10	Solanaceae
86.	Sassafras albidum	4-5	Lauraceae
91.	Pastinaca sativa	4-10	Apiaceae
	Polytaenia nuttallii	4-6	Apiaceae
	Sanicula gregaria	3-7	Apiaceae
	Taenidia integerrima	4-7	Apiaceae
	Thaspium barbinode	4-6	Apiaceae
	T. trifoliatum	4-6	Apiaceae
	Zizia aptera	4-6	Apiaceae
	Z. aurea	4-6	Apiaceae
	Artemisia spp	6-11	Asteraceae
	Chrysanthemum leucanthemum	5-8	Asteraceae

	Krigia virginca	5-8	Asteraceae
	Lactuca scariola	6-10	Asteraceae
	Matricaria matricarioides	5-10	Asteraceae
	Ratibida pinnata	5-9	Asteraceae
	Senecio aureus	4-6	Asteraceae
	S. glabellus	4-6	Asteraceae
	S. obovatus	3-6	Asteraceae
	S. plattensis	4-6	Asteraceae
	Sonchus oleraceus	6-10	Asteraceae
	Medicago lupulina	2-12	Fabaceae
	Stylosanthes biflora	5-9	Fabaceae
	Trifolium campestre	4-9	Fabaceae
92.	Astragalus canadensis	5-8	Fabaceae
	A. mexicanus	3-5	Fabaceae
	Cassia fasciculata	6-10	Fabaceae
	C. marilandica	6-10	Fabaceae
	Lotus corniculatus	5-9	Fabaceae
	Medicago lupulina	2-12	Fabaceae
	Melilotus officinalis	5-10	Fabaceae
	Tephrosia virginiana	5-8	Fabaceae
	Trifolium dubium	4-10	Fabaceae
	Pedicularis canadensis	4-5	Scrophulariaceae
94.	Barbarea vulgaris	3-6	Brassicaceae
	Brassica spp.	4-10	Brassicaceae
	Descurainia pinnata	4-5	Brassicaceae
	Rorippa spp.	4-10	Brassicaceae
	Sisymbrium altissimum	4-5	Brassicaceae
	S. officinale	5-10	Brassicaceae
	Oenothera laciniata	5-10	Onagraceae
	O. linifolia	5-8	Onagraceae
	Zanthoxylum americanum	4-5	Rutaceae
95.	Taenida integerrima	4-7	Apiaceae
	Rhus glabra	5-7	Anacardiaceae
	Cassia fasciculata	6-10	Fabaceae
	C. marilandica	6-10	Fabaceae
	Hibiscus trionum	6-9	Malvaceae
	Oxalis stricta	3-10	Oxalidaceae
	Ranunculus abortivus	3-6	Ranunculaceae
	R. fasciculatus	3-5	Ranunculaceae
	R. harveyi	3-5	Ranunculaceae
	R. hispidus	3-6	Ranunculaceae
	R. micranthus	3-5	Ranunculaceae
	R. recurvatus	5-7	Ranunculaceae
	R. scleratus	4-8	Ranunculaceae
	R. septentrionalis	4-6	Ranunculaceae
	Geum vernum	4-6	Rosaceae
	Potentilla norvegica	5-10	Rosaceae

	P. recta	4-8	Rosaceae
	P. simplex	4-6	Rosaceae
	Zanthoxylum americanum	4-5	Rutaceae
	Solanum rostratum	5-10	Solanaceae
96.	Caulophyllum thalictroides	3-5	Berberidaceae
97.	Passiflora lutea	6-9	Passifloraceae
	Geum vernum	4-6	Rosaceae

Orange flowers

16.	Hemerocallis fulva	5-8	Liliaceae
46.	Lilium michiganense	6-7	Liliaceae
65.	Campsis radicans	5-10	Bignoniaceae
71.	Krigia biflora	4-8	Asteraceae
	Lithospermum canescens	3-6	Boraginaceae
72.	Linaria vulgaris	5-11	Scrophulariaceae
75.	Asclepias tuberosa	5-10	Asclepiadaceae
	Lithospermum canescens	3-6	Boraginaceae
81.	Krigia biflora	4-8	Asteraceae
82.	Impatiens capensis	5-10	Balsaminaceae
84.	Erysimum capitatum	4-7	Brassicaeae

Pink to Red flowers

02.	Corallorhiza wisteriana	2-6	Orchidaceae
03.	Asimina triloba	3-5	Annonaceae
11.	Antennaria plantaginifolia	3-6	Asteraceae
12.	Liparis liliifolia	5-6	Orchidaceae
	Orchis spectabilis	2-6	Orchidaceae
13.	Asarum canadense	4-5	Aristolochiaceae
15.	Talinum calycinum	5-8	Portulacaceae
	T. parviflorum	5-8	Portulacaceae
	Dodecatheon meadia	4-6	Primulaceae
16.	Allium canadense	5-7	Liliaceae
	A. mutabile	4-6	Liliaceae
	A. vineale	4-7	Liliaceae
17.	Talinum calycinum	5-8	Portulacaceae
31.	Trifolium pratense	4-9	Fabaceae
35.	Oxalis violacea	3-7 & 9-11	Oxalidaceae
	Anemonella thalictroides	3-6	Ranunculaceae

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36.	Anemonella thalictroides	3-6	Ranunculaceae
37.	Anemonella thalictroides	3-6	Ranunculaceae
41.	Cornus florida	3-5	Cornaceae
	Rotala ramosior	6-10	Lythraceae
42.	Triosteum aurantiacum	4-7	Caprifoliaceae
	T. perfoliatum	4-7	Caprifoliaceae
43.	Trillium recurvatum	4-5	Liliaceae
	T. viride	4-5	Liliaceae
44.	Dipsacus sylvestris	6-10	Dipsacaceae
	Mitchella repens	5-7	Rubiaceae
45.	Apocynum androsaemifolium	5-7	Apocynaceae
	Asclepias incarnata	6-8	Asclepiadaceae
	A. quadrifolia	5-7	Asclepiadaceae
	A. syriaca	5-9	Asclepiadaceae
	Matelea decipiens	5-6	Asclepiadaceae
	Agrostemma githago	5-9	Caryophyllaceae
	Dianthus armeria	5-10	Caryophyllaceae
	Saponaria officinalis	5-10	Caryophyllaceae
	Silene antirrhina	4-9	Caryophyllaceae
	S. regia	5-10	Caryophyllaceae
	S. virginica	4-6	Caryophyllaceae
	Sabatia angularis	6-9	Gentianaceae
	Spigelia marilandica	5-8	Loganiaceae
	Mirabilis nyctaginea	5-10	Nyctaginaceae
	Phlox maculata	5-10	Polemoniaceae
	P. pilosa	4-7 & 10-11	Polemoniaceae
	Claytonia virginica	2-5	Portulacaceae
	Anagallis arvensis	5-9	Primulaceae
51.	Betula nigra	4-5	Betulaceae
	Dipsacus sylvestris	6-10	Dipsacaceae
52.	Blephilia ciliata	5-8	Lamiaceae
	B. hirsuta	5-9	Lamiaceae
	Lamium amplexicaule	2-11	Lamiaceae
	L. purpureum	3-10	Lamiaceae
	Mentha spp	6-10	Lamiaceae
	Monarda fistulosa	5-8	Lamiaceae
	M. russeliana	4-6	Lamiaceae
	Stachys tenuifolia	6-9	Lamiaceae
	Teucrium canadense	6-9	Lamiaceae
	Phryma leptostachya	6-9	Phrymaceae
53.	Physostegia virginiana	5-9	Lamiaceae
54.	Euonymus atropurpureus	4-6	Celastraceae
62.	Leonurus cardiaca	5-8	Lamiaceae
	Pedicularis canadensis	4-5	Scrophulariaceae

MAY AND JUNE-Pink to Red

64.	Dentaria laciniata	4-6	Brassicaceae
65.	Geranium carolinanum	5-7	Geraniaceae
	G. maculatum	4-6	Geraniaceae
	Anemonella thalictroides	3-6	Ranunculaceae
	Verbena candensis	3-11	Verbenaceae
66.	Anemonella thalictroides	3-6	Ranunculaceae
67.	Anemonella thalictroides	3-6	Ranunculaceae
71.	Antennaria plantaginifolia	3-6	Asteraceae
	Echinacea pallida	5-7	Asteraceae
	Erigeron pulchellus	4-6	Asteraceae
	Liatris squarrosa	6-9	Asteraceae
	Tragopogon porrifolius	5-7	Asteraceae
	Lechea tenuifolia	6-11	Cistaceae
	Chenopodium spp	5-11	Chenopodiaceae
	Polygala sanguinea	5-10	Polygalaceae
	Polygonum spp	5-11	Polygonaceae
	Rumex spp	4-9	Polygonaceae
72.	Echium vulgare	5-9	Boraginaceae
73.	Asimina triloba	3-5	Annonaceae
	Tradescantia longipes	4-5	Commelinaceae
	T. virginiana	4-6	Commelinaceae
74.	Gaura biennis	6-10	Onagraceae
75.	Cynoglossum officinale	5-7	Boraginaceae
	Convolvulus arvensis	5-9	Convolvulaceae
	C. sepium	5-9	Convolvulaceae
	Rhododendron roseum	4-5	Ericaceae
	Vaccinium vacillans	4-5	Ericaceae
	Phytolacca americana	5-10	Phytolaccaceae
76.	Allium vineale	4-7	Liliaceae
	Lythrum alatum	6-9	Lythraceae
81.	Erigeron philadelphicus	4-6	Asteraceae
	E. pulchellus	4-6	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Carpinus caroliniana	4-5	Betulaceae
	Rumex spp	4-9	Polygonaceae
84.	Hesperis matronalis	4-6	Brassicaceae
	Gaura biennis	6-10	Brassicaceae
	Oenothera speciosa	5-7	Onagraceae
85.	Specularia perfoliata	4-8	Campanulaceae
91.	Carduus nutans	5-10	Asteraceae
	Cirsium vulgare	5-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Schrankia uncinata	5-9	Fabaceae

MAY AND JUNE-Pink to Red to Violet to Blue

	Strophostyles spp	6-10	Fabaceae
	Trifolium pratense	5-9	Fabaceae
	T. reflexum	5-8	Fabaceae
	Rumex spp	4-9	Polygonaceae
	Castilleja coccinea	3-7	Scrophulariaceae
92.	Apios americana	6-9	Fabaceae
	Coronilla varia	5-8	Fabaceae
	Desmodium spp	6-8	Fabaceae
	Lespedeza spp	5-10	Fabaceae
	Tephrosia vriginiana	5-8	Fabaceae
	Vicia spp	4-10	Fabaceae
	Castilleja coccinea	3-7	Scrophulariaceae
	Pedicularis canadensis	4-5	Scrophulariaceae
95.	Aquilegia canadensis	4-7	Ranunculaceae
	Rosa carolina	5-6	Rosaceae
	R. setigera	5-7	Rosaceae
97.	Passiflora incarnata	6-9	Passifloraceae

Violet to Blue flowers

02.	Aplectrum hymenale	5-6	Orchidaceae
05.	Orobanche uniflora	4-6	Orobanchaceae
16.	Sisyrinchium albidum	5-6	Iridaceae
	S. campestre	4-6	Iridaceae
	Camassia scilloides	3-5	Liliaceae
	Heteranthera limosa	6-9	Pontederiaceae
	Pontederia cordata	5-11	Pontederiaceae
22.	Psoralea esculenta	4-7	Fabaceae
	Viola missouriensis	3-5	Violaceae
	V. papillionacea	3-6	Violaceae
	V. sagittata	4-6	Violaceae
	V. soraria	3-6	Violaceae
25.	Viola missouriensis	3-5	Violaceae
	V. papilionacea	3-6 & 10-11	Violaceae
	V. sagittata	4-6	Violaceae
32.	Viola pedata	3-6 & 9-11	Violaceae
	V. triloba	4-5	Violaceae
35.	Oxalis violacea	3-7 & 9-11	Oxalidaceae
	Viola triloba	4-5	Violaceae
42.	Justicia americana	5-10	Acanthaceae
	Triosteum perfoliatum	4-7	Caprifoliaceae
	Astragalus distortus	4-6	Fabaceae
	Hedeoma hispida	5-7	Lamiaceae

	Prunella vulgaris	5-9	Lamiaceae
	Satureja arkansana	5-10	Lamiaceae
	Isotria verticillata	5	Orchidaceae
	Polygala verticillata	5-10	Polygalaceae
43.	Trillium recurvatum	4-5	Liliaceae
	T. viride	4-5	Liliaceae
44.	Houstonia nigricans	5-10	Rubiaceae
45.	Ruellia humilis	5-10	Acanthaceae
	R. pedunculata	5-9	Acanthaceae
	R. strepens	5-10	Acanthaceae
	Vinca minor	4-5	Apocynaceae
	Asclepias purpurascens	5-6	Asclepiadaceae
	A. sullivantii	6-7	Asclepiadaceae
	A. viridiflora	5-8	Asclepiadaceae
	A. viridis	5-6	Asclepiadaceae
	Linum spp	5-9	Linaceae
	Mirabilis nyctaginea	5-10	Nyctaginaceae
	Phlox divaricata	3-6	Polemoniaceae
	P. maculata	5-10	Polemoniaceae
	P. pilosa	4-7 & 10-11	Polemoniaceae
	Anagallis arvensis	5-9	Primulaceae
	Lindernia anagallidea	6-10	Scrophulariaceae
51.	Lycopus spp	6-10	Lamiaceae
	Veronicastrum virginicum	6-9	Scrophulariaceae
52.	Blephilia ciliata	5-8	Lamiaceae
	B. hirsuta	5-9	Lamiaceae
	Glechoma hederacea	3-7	Lamiaceae
	Hedeoma hispida	5-7	Lamiaceae
	Lamium amplexicaule	2-11	Lamiaceae
	L. purpureum	3-10	Lamiaceae
	Leonurus cardiaca	5-8	Lamiaceae
	Mentha spp	6-10	Lamiaceae
	Monarda fistulosa	5-8	Lamiaceae
	M. russeliana	4-6	Lamiaceae
	Physostegia virginiana	5-9	Lamiaceae
	Prunella vulgaris	5-9	Lamiaceae
	Scutellaria incana	6-9	Lamiaceae
	S. lateriflora	6-10	Lamiaceae
	S. ovata	5-10	Lamiaceae
	S. parvula	5-7	Lamiaceae
	Teucrium canadense	6-9	Lamiaceae
	Collinsia verna	4-6	Scrophulariaceae
	Mimulus alatus	6-9	Scrophulariaceae
	M. ringens	6-9	Scrophulariaceae
	Veronica spp	3-8	Scrophulariaceae
	Lippia lanceolata	5-10	Verbenaceae

MAY AND JUNE-Violet to Blue

	Verbena simplex	5-9	Verbenaceae
	V. stricta	5-9	Verbenaceae
54.	Euonymus atropurpureus	4-6	Celastraceae
55.	Mentha spp	6-10	Lamiaceae
	Mitella diphylla	4-6	Saxifragaceae
	Lindernia anagallidea	6-10	Scrophulariaceae
	Verbena hastata	6-10	Verbenaceae
	V. simplex	5-9	Verbenaceae
	V. stricta	5-9	Verbenaceae
61.	Aralia racemosa	6-8	Araliaceae
62.	Leonurus cardiaca	5-8	Lamiaceae
	Salvia lyrata	4-6	Lamiaceae
	Conobea multifida	5-10	Scrophulariaceae
65.	Verbena canadensis	3-11	Verbenaceae
66.	Caulophyllum thalictroides	3-5	Berberidaceae
71.	Cichorium intybus	5-10	Asteraceae
	Erigeron pulchellus	4-6	Asteraceae
	Liatris squarrosa	6-9	Asteraceae
	Tragopogon porrifolius	5-7	Asteraceae
72.	Echium vulgare	5-9	Boraginaceae
	Commelina communis	5-10	Commelinaceae
	Nemastylis geminiflora	4-5	Iridaceae
	Pontederia cordata	6-10	Pontederiaceae
	Kickxia elatine	5-10	Scrophulariaceae
	Linaria canadensis	4-9	Scrophulariaceae
	Viola rafinesquii	3-5	Violaceae
73.	Tradescantia longipes	4-5	Commelinaceae
	T. ohiensis	5-7	Commelinaceae
	T. subaspera	6-9	Commelinaceae
	T. virginiana	4-6	Commelinaceae
75.	Amsonia illustris	4-5	Apocynaceae
	A. tabernaemontana	4-5	Apocynaceae
	Cynoglossum virginianum	4-6	Boraginaceae
	Myosotis virginica	4-5	Boraginaceae
	Linum usitatissimum	5-9	Linaceae
76.	Nemastylis geminiflora	4-5	Iridaceae
	Lythrum alatum	6-9	Lythraceae
	Heteranthera limosa	6-9	Pontederiaceae
	Pontederia cordata	5-11	Pontederiaceae
81.	Cichorium intybus	5-10	Asteraceae
	Echinacea purpurea	5-10	Asteraceae
	Erigeron annuus	5-11	Asteraceae
	Veronia baldwinii	5-10	Asteraceae

MAY AND JUNE-Violet to Blue to Green

82.	Lobelia inflata	6-10	Campanulaceae
	L. spicata	5-8	Campanulaceae
	Viola rafinesquii	3-5	Violaceae
84.	Iodanthus pinnatifidus	5-6	Brassicaceae
85.	Cynoglossum virginianum	4-6	Boraginaceae
	Campanula americana	6-10	Campanulaceae
	Specularia biflora	4-6	Campanulaceae
	S. perfoliata	4-8	Campanulaceae
	Hydrophyllum appendiculatum	4-7	Hydrophyllaceae
	H. canadense	5-7	Hydrophyllaceae
	Datura stramonium	5-10	Solanaceae
	Solanum americanum	5-11	Solanaceae
	S. carolinense	5-10	Solanaceae
91.	Carduus nutans	5-10	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Petalostemon purpureum	5-9	Fabaceae
	Psoralea esculenta	4-7	Fabaceae
	P. onobrychis	5-9	Fabaceae
	P. psoralioides	5-7	Fabaceae
	P. tenuifolia	5-9	Fabaceae
92.	Amorpha canescens	5-8	Fabaceae
	A. fruticosa	5-6	Fabaceae
	Apios americana	6-9	Fabaceae
	Astragalus distortus	5-6	Fabaceae
	Baptisia australis	4-6	Fabaceae
	Clitoria mariana	5-9	Fabaceae
	Desmodium spp	6-10	Fabaceae
	Lespedeza spp	5-10	Fabaceae
	Vicia spp	4-10	Fabaceae
	Delphinium carolinianum	5-6	Ranunculaceae
	D. tricorne	3-6	Ranunculaceae
94.	Iodanthus pinnatifidus	5-6	Brassicaceae
95.	Ellisia nyctelea	4-6	Hydrophyllaceae
	Hydrophyllum appendiculatum	4-7	Hydrophyllaceae
	H. canadense	5-7	Hydrophyllaceae
	H. virginianum	4-7	Hydrophyllaceae
	Phacelia gilioides	4-6	Hydrophyllaceae
	P. purshii	4-6	Hydrophyllaceae

Green flowers

02.	Corallorhiza wisteriana	2-6	Orchidaceae
05.	Zanthoxylum americanum	4-5	Rutaceae
11.	Acorus calamus	5-7	Araceae
	Plantago spp	4-11	Plantaginaceae
	Myosurus minimus	3-5	Ranunculaceae

MAY AND JUNE-Green

15.	Androsace occidentalis	3-5	Primulaceae
	Myosurus minimus	3-5	Ranunculaceae
16.	Agave virginica	6-8	Amaryllidaceae
21.	Plantago spp	4-11	Plantaginaceae
25.	Heuchera americana	4-6	Saxifragaceae
	H. richardsonii	4-7	Saxifragaceae
	Saxifraga pensylvanica	4-6	Saxifragaceae
31.	Arisaema atrorubens	4-6	Araceae
	A. dracontium	4-6	Araceae
41.	Dioscorea villosa	4-6	Dioscoreaceae
	Euphorbia supina	5-10	Euphorbiaceae
	Polygala verticillata	5-10	Polygalaceae
42.	Triosteum angustifolium	4-5	Caprifoliaceae
	Isotria verticillata	5	Orchidaceae
43.	Trillium viride	3-5	Liliaceae
44.	Swertia caroliniensis	5-6	Gentianaceae
	Galium spp	4-9	Rubiaceae
45.	Apocynum cannabinum	5-8	Apocynaceae
	Asclepias hirtella	5-8	Asclepiadaceae
	A. verticillata	5-9	Asclepiadaceae
	A. viridiflora	5-8	Asclepiadaceae
	A. viridis	5-6	Asclepiadaceae
	Androsace occidentalis	3-5	Primulaceae
51.	Euphorbia maculata	5-10	Euphorbiaceae
	E. supina	5-10	Euphorbiaceae
	Boehmeria cylindrica	6-10	Urticaceae
	Urtica dioica	5-10	Urticaceae
55.	Mitella diphylla	4-6	Saxifragaceae
62.	Conobea multifida	5-10	Scrophulariaceae
64.	Sanicula gregaria	3-7	Apiaceae
65.	Panax quinquefolius	6-7	Araliaceae
	Anemone virginiana	4-8	Ranunculaceae
71.	Amaranthus spp	6-10	Amaranthaceae
	Artemisia spp	6-11	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Croton spp	5-10	Euphorbiaceae
	Crotonopsis spp	6-9	Euphorbiaceae
	Euphorbia commutata	3-6	Euphorbiaceae
	Rumex spp	4-9	Polygonaceae
	Parietaria pensylvanica	5-10	Urticaceae
72.	Malaxis unifolia	5-6	Orchidaceae

MAY AND JUNE-Green to Brown

75.	Vaccinium vacillans	4-5	Ericaceae
	Hybanthus concolor	3-6	Violaceae
76.	Dioscorea villosa	4-6	Dioscoreaceae
	Allium vineale	4-7	Liliaceae
	Polygonatum commutatum	4-6	Liliaceae
	Smilax tamnoides	4-6	Liliaceae
	Menispermum canadense	5-7	Menispermaceae
81.	Artemisia spp	6-11	Asteraceae
	Cacalia atriplicifolia	6-10	Asteraceae
	C. muhlenbergii	5-9	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Ostrya virginiana	3-5	Betulaceae
	Acalypha spp	6-10	Euphorbiaceae
	Menispermum canadense	5-7	Menispermaceae
	Rumex spp	4-9	Polygonaceae
85.	Rhamnus caroliniana	5-6	Rhamnaceae
	Heuchera americana	4-6	Saxifragaceae
	H. richardsonii	4-7	Saxifragaceae
	Vitis spp	5-7	Vitaceae
86.	Menispermum canadense	5-7	Menispermaceae
91.	Sanicula gregaria	4-6	Apiaceae
	Artemisia spp	6-11	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Desmanthus illinoensis	6-8	Fabaceae
	Rumex spp	4-9	Polygonaceae
94.	Sanicula gregaria	4-6	Apiaceae
	Descurainia pinnata	4-5	Brassicaceae
	Ptelea trifoliata	4-6	Rutaceae
	Zanthoxylum americanum	4-5	Rutaceae
95.	Rhus glabra	5-7	Anacardiaceae
	R. radicans	5-6	Anacardiaceae
	Aralia racemosa	6-8	Araliaceae
	Ptelea trifoliata	4-6	Rutaceae
	Zanthoxylum americanum	4-5	Rutaceae
	Parthenocissus quinquefolia	5-8	Vitaceae
96.	Caulophyllum thalictroides	3-5	Berberidaceae
97.	Passiflora lutea	6-9	Passifloraceae

Brown flowers

03.	Asimina triloba	3-5	Annonaceae
11.	Typha spp	5-8	Typhaceae
13.	Asarum canadense	4-5	Aristolochiaceae
73.	Asimina triloba	3-5	Annonaceae

MAY AND JUNE-Brown

42.	Triosteum perfoliatum	4-7	Caprifoliaceae
44.	Galium spp	4-9	Rubiaceae
45.	Matelea decipiens	5-6	Asclepiadaceae
72.	Aristolochia serpentaria	5-7	Aristolochiaceae
	A. tomentosa	5-6	Aristolochiaceae
73.	Asimina triloba	3-5	Annonaceae
81.	Acalypha spp	6-10	Euphorbiaceae
92.	Apios americana	6-9	Fabaceae

JULY AND AUGUST-White

White or whitish flowers

02.	Corallorhiza odontorhiza	8-10	Orchidaceae
	Spiranthes cernua	8-10	Orchidaceae
	S. lacera	8-10	Orchidaceae
04.	Monotropa uniflora	8-10	Pyrolaceae
05.	Cuscuta spp	7-10	Convolvulaceae
	Monotropa uniflora	8-10	Pyrolaceae
11.	Plantago spp	4-11	Plantaginaceae
12.	Spiranthes cernua	8-10	Orchidaceae
	S. lacera	8-10	Orchidaceae
13.	Alisma plantago-aquatica	5-9	Alismataceae
	Echinodorus cordifolius	6-9	Alismataceae
	Sagittaria engelmanniana	6-9	Alismataceae
	S. latifolia	6-9	Alismataceae
	S. montevidensis	6-9	Alismataceae
15.	Talinum parviflorum	5-8	Portulacaceae
16.	Allium vineale	4-7	Liliaceae
	Yucca smalliana	5-8	Liliaceae
	Heteranthera limosa	6-9	Pontederiaceae
27.	Linaria canadensis	4-9	Scrophulariaceae
31.	Trifolium repens	4-10	Fabaceae
37.	Sagina decumbens	3-8	Caryophyllaceae
41.	Froelichia gracilis	5-9	Amaranthaceae
	Iresene rhizomatosa	8-10	Amaranthaceae
	Eclipta alba	7-10	Asteraceae
	Iva ciliata	7-10	Asteraceae

	Euphorbia supina	5-10	Euphorbiaceae
	Pycnanthemum albescens	7-9	Lamiaceae
	Rotala ramosior	6-10	Lythraceae
	Polygala verticillata	5-10	Polygalaceae
42.	Justicia americana	5-10	Acanthaceae
	Pycnathemum pilosum	8-9	Lamiaceae
	P. tenuifolium	6-9	Lamiaceae
	Gratiola spp	4-10	Scrophulariaceae
44.	Justicia americana	5-10	Acanthaceae
	Sagina decumbens	3-8	Caryophyllaceae
	Cornus obliqua	5-7	Cornaceae
	C. racemosa	5-7	Cornaceae
	Cephalanthus occidentalis	6-8	Rubiaceae
	Diodia teres	6-10	Rubiaceae
	Galium spp	4-9	Rubiaceae
	Houstonia longifolia	4-7 & 10	Rubiaceae
	H. nigricans	5-10	Rubiaceae
	Mitchella repens	5-7	Rubiaceae
	Spermacoce glabra	6-10	Rubiaceae
45.	Mollugo verticillata	5-11	Aizoaceae
	Apocynum cannabinum	5-8	Apocynaceae
	Asclepias hirtella	5-8	Asclepiadaceae
	A. incarnata	6-8	Asclepiadaceae
	A. quadrifolia	5-7	Asclepiadaceae
	A. verticillata	5-9	Asclepiadaceae
	Cynanchum laeve	7-9	Asclepiadaceae
	Arenaria serpyllifolia	4-8	Caryophyllaceae
	A. stricta	5-7	Caryophyllaceae
	Cerastium spp	3-11	Caryophyllaceae
	Sagina decumbens	3-8	Caryophyllaceae
	Saponaria officinalis	5-10	Caryophyllaceae
	Silene stellata	5-9	Caryophyllaceae
	Stellaria media	1-12	Caryophyllaceae
	Euphorbia corollata	5-10	Euphorbiaceae
	Phlox pilosa	4-7 & 10-11	Polemoniaceae
	Bumelia lanuginosa	4-7	Sapotaceae
	Lindernia analgallidea	6-10	Scrophulariaceae
47.	Cerastium spp	3-11	Caryophyllaceae
	Stellaria media	1-12	Caryophyllaceae
51.	Eclipta alba	7-10	Asteraceae
	Eupatorium altissimum	8-10	Asteraceae
	E. perfoliatum	7-10	Asteraceae
	E. purpureum	7-9	Asteraceae
	E. rugosum	7-10	Asteraceae
	E. serotinum	8-10	Asteraceae
	Galinsoga ciliata	5-11	Asteraceae
	Iva ciliata	7-10	Asteraceae

	Euphorbia maculata	5-10	Euphorbiaceae
	E. supina	5-7	Euphorbiaceae
	Lycopus spp	6-10	Lamiaceae
	Hydrangea arborescens	5-7	Saxifragaceae
	Veronicastrum virginiana	6-9	Scrophulariaceae
52.	Blephilia ciliata	5-8	Lamiaceae
	Cunila origanoides	7-11	Lamiaceae
	Lycopus spp	6-10	Lamiaceae
	Marrubium vulgare	5-9	Lamiaceae
	Perilla frutescens	8-10	Lamiaceae
	Scutellaria lateriflora	6-10	Lamiaceae
	Gratiola spp	4-10	Scrophulariaceae
	Penstemon digitalis	5-7	Scrophulariaceae
54.	Circaea quadrisulcata	6-8	Onagraceae
	Veronica spp	3-8	Scrophulariaceae
55.	Perilla frutescens	8-10	Lamiaceae
	Lindernia analgallidea	6-10	Scrophulariaceae
	Penstemon pallidus	4-7	Scrophulariaceae
	Verbena urticifolia	6-10	Verbenaceae
61.	Polymnia canadensis	5-10	Asteraceae
62.	Perilla frutescens	8-10	Lamiaceae
	Conobea multifida	5-10	Scrophulariaceae
64.	Sanicula gregaria	3-7	Apiaceae
65.	Panax quinquefolius	6-7	Araliaceae
	Sambucus canadensis	5-7	Caprifoliaceae
	Anemone canadensis	5-7	Ranunculaceae
	A. virginiana	4-8	Ranunculaceae
71.	Eryngium yuccifolium	7-8	Apiaceae
	Aster ericoides	7-10	Asteraceae
	A. pilosus	8-11	Asteraceae
	A. simplex	8-10	Asteraceae
	Cacalia tuberosa	5-8	Asteraceae
	Erigeron canadensis	6-11	Asteraceae
	E. strigosus	5-9	Asteraceae
	Gnaphalium obtusifolium	7-11	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Liatris pycnostachya	7-10	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	P. aspera	8-9	Asteraceae
	Polygonum spp	5-11	Polygonaceae
	Saururus cernuus	5-9	Saururaceae
72.	Corallorhiza odontorhiza	8-10	Orchidaceae
	Spiranthes cernua	8-11	Orchidaceae
74.	Capsella bursa-pastoris	1-12	Brassicaceae

JULY AND AUGUST-White

	Cardamine parviflora	3-7	Brassicaceae
	Cornus alternifolia	5-7	Cornaceae
	Gaura biennis	6-10	Onagraceae
	Spermacoce glabra	6-10	Rubiaceae
75.	Cynoglossum officinale	5-7	Boraginaceae
	Heliostropium tenellum	6-8	Boraginaceae
	Onosmodium spp	5-7	Boraginaceae
	Convolvulus arvensis	5-9	Convolvulaceae
	C. sepium	5-9	Convolvulaceae
	Ipomoea lacunosa	7-10	Convolvulaceae
	I. pandurata	5-9	Convolvulaceae
	Euphorbia corollata	5-10	Euphorbiaceae
	Phytolacca americana	5-10	Phytolaccaceae
	Comandra richardsiana	4-7	Santalaceae
	Bumelia lanuginosa	4-7	Sapotaceae
	Solanum americanum	5-9	Solanaceae
76.	Allium vineale	4-7	Liliaceae
	Menispermum canadense	5-7	Menispermaceae
	Heteranthera limosa	6-9	Pontederiaceae
81.	Aster lateriflorus	8-11	Asteraceae
	A. sagittifolius	8-11	Asteraceae
	A. simplex	8-10	Asteraceae
	Cacalia atriplicifolia	6-10	Asteraceae
	C. muhlenbergii	5-10	Asteraceae
	C. tuberosa	5-8	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Erechtites hieracifolia	7-11	Asteraceae
	Erigeron annuus	5-11	Asteraceae
	E. canadensis	6-11	Asteraceae
	E. strigosus	5-9	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Kuhnia eupatorioides	7-10	Asteraceae
	Parthenium hispidum	4-10	Asteraceae
	P. integrifolium	4-9	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	P. aspera	8-9	Asteraceae
	Solidago petiolaris	5-11	Asteraceae
	Verbesina virginica	8-10	Asteraceae
	Laportea canadensis	5-8	Urticaceae
82.	Lobelia inflata	6-10	Campanulaceae
	L. spicata	5-8	Campanulaceae
	Marrubium vulgare	5-9	Lamiaceae
84.	Capsella bursa-pastoris	1-12	Brassicaceae
	Lepidium campestre	4-9	Brassicaceae
	L. virginicum	2-11	Brassicaceae
	Epilobium coloratum	7-10	Onagraceae
	Gaura biennis	6-10	Onagraceae

JULY AND AUGUST-White

	Oenothera speciosa	5-7	Onagraceae
85.	Ipomoea lacunosa	7-10	Convolvulaceae
	Sicyos angulatus	7-10	Cucurbitaceae
	Hydrophyllum canadense	5-7	Hydrophyllaceae
	Hibiscus lasiocarpus	7-10	Malvaceae
	Ceanothus americanus	5-11	Rhamnaceae
	Verbascum blattaria	5-9	Scrophulariaceae
	Datura stramonium	5-10	Solanaceae
	Solanum americanum	5-9	Solanaceae
	S. carolinense	4-10	Solanaceae
	Ampelopsis cordata	5-7	Vitaceae
86.	Menispermum canadense	5-7	Menispermaceae
91.	Cicuta maculata	5-9	Apiaceae
	Conium maculatum	5-8	Apiaceae
	Cryptotaenia canadensis	5-8	Apiaceae
	Daucus carota	5-10	Apiaceae
	Sanicula canadensis	5-7	Apiaceae
	Torilis japonica	6-8	Apiaceae
	Aralia racemosa	6-8	Araliaceae
	Achillea millefolium	4-11	Asteraceae
	Anthemis cotula	5-11	Asteraceae
	Carduus nutans	5-10	Asteraceae
	Chrysanthemum leucanthemum	5-10	Asteraceae
	Matricaria chamomilla	5-10	Asteraceae
	Polymnia canadensis	5-10	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	Desmanthus illinoensis	6-8	Fabaceae
	Petalostemom candidum	5-9	Fabaceae
	Psoralea onobrychis	5-9	Fabaceae
	Strophostyles spp	6-10	Fabaceae
	Trifolium pratense	5-9	Fabaceae
	T. reflexum	5-8	Fabaceae
	T. repens	4-10	Fabaceae
	Cimicifuga racemosa	5-8	Ranunculaceae
	Thalictrum revolutum	5-7	Ranunculaceae
92.	Amphicarpa bracteata	8-9	Fabaceae
	Astragalus canadensis	5-8	Fabaceae
	Baptisia leucantha	5-7	Fabaceae
	Coronilla varia	5-8	Fabaceae
	Desmodium spp	6-10	Fabaceae
	Lespedeza spp	5-10	Fabaceae
	Melilotus albus	5-10	Fabaceae
	Vicia spp	4-9	Fabaceae
94.	Sanicula gregaria	3-7	Apiaceae
	Capsella bursa-pastoris	1-12	Brassicaceae
	Cardamine parviflora	3-7	Brassicaceae
	Nasturtium officinale	4-10	Brassicaceae

	Polanisia dodecandra	5-10	Capparaceae
	Clematis spp	5-9	Ranunculaceae
95.	Rhus copallina	5-11	Anacardiaceae
	Aralia racemosa	6-8	Araliaceae
	Onosmodium spp	5-7	Boraginaceae
	Hydrophyllum appendiculatum	4-7	Hydrophyllaceae
	H. canadense	4-7	Hydrophyllaceae
	H. virginanum	4-7	Hydrophyllaceae
	Geum canadense	5-11	Rosaceae
	Gillenia stipulata	5-7	Rosaceae
	Potentilla recta	4-8	Rosaceae
	Rosa setigera	5-7	Rosaceae
97.	Passiflora incarnata	6-9	Passifloraceae
	Thalictrum revolutum	5-7	Ranunculaceae

Yellow flowers

07.	Opuntia compressa	5-7	Cactaceae
11.	Acorus calamus	5-7	Araceae
16.	Agave virginica	6-8	Amaryllidaceae
	Heteranthera dubia	6-10	Pontederiaceae
17.	Nelumbo lutea	6-9	Nymphaeaceae
	Nuphar luteum	6-10	Nymphaeaceae
21.	Krigia virginica	5-8	Asteraceae
	Silphium terebinthinaceum	7-10	Asteraceae
31.	Taraxacum officinale	1-12	Asteraceae
41.	Coreopsis lanceolata	4-7	Asteraceae
	C. pubescens	5-10	Asteraceae
	Silphium integrifolium	7-9	Asteraceae
42.	Triosteum perfoliatum	4-7	Caprifoliaceae
	Gratiola spp	4-10	Scrophulariaceae
44.	Ascyrum hypericoides	5-10	Hypericaceae
45.	Hypericum drummondii	6-9	Hypericaceae
	H. gentianoides	7-10	Hypericaceae
	H. mutilium	7-10	Hypericaceae
	H. perforatum	5-9	Hypericaceae
	H. punctatum	6-9	Hypericaceae
	H. spathulatum	6-9	Hypericaceae
	H. sphaerocarpum	5-9	Hypericaceae
	Linum spp	5-9	Linaceae
	Lysimachia spp	5-9	Primulaceae
	Seymeria macrophylla	6-9	Scrophulariaceae
51.	Bidens cernua	8-10	Asteraceae

JULY AND AUGUST-Yellow

	Brickellia grandiflora	7-10	Asteraceae
	Helianthus hirsutus	7-10	Asteraceae
	H. mollis	7-10	Asteraceae
	H. tuberosus	8-10	Asteraceae
	Heliopsis helianthoides	5-9	Asteraceae
	Polymnia uvedalia	7-9	Asteraceae
	Silphium integrifolium	7-9	Asteraceae
	S. perfoliatum	7-9	Asteraceae
52.	Agastache nepteoides	7-9	Lamiaceae
	Pedicularis lanceolata	8-10	Scrophulariaceae
55.	Mentzelia oligosperma	5-9	Loasaceae
	Abutilon theophrasti	6-10	Malvaceae
	Agrimonia spp	7-9	Rosaceae
	Gerardia flava	6-9	Scrophulariaceae
61.	Bidens bipinnata	8-10	Asteraceae
	B. polylepis	8-10	Asteraceae
	Coreopsis pubescens	5-10	Asteraceae
	C. tripteris	7-9	Asteraceae
	Matricaria matricarioides	5-10	Asteraceae
	Polymnia uvedalia	7-9	Asteraceae
65.	Gerardia grandiflora	7-9	Scrophulariaceae
	G. pedicularis	8-9	Scrophulariaceae
	Seymeria macrophylla	6-9	Scrophulariaceae
71.	Chrysopsis villosa	6-10	Asteraceae
	Coreopsis lanceolata	4-7	Asteraceae
	Helenium amarum	6-11	Asteraceae
	H. autumnale	8-11	Asteraceae
	H. flexuosum	6-11	Asteraceae
	Helianthus maximilianii	7-10	Asteraceae
	Heterotheca latifolia	8-11	Asteraceae
	Hieracium gronovii	5-10	Asteraceae
	H. longipilum	7-9	Asteraceae
	H. scabrum	6-9	Asteraceae
	Lactuca canadensis	7-9	Asteraceae
	Rudbeckia missouriensis	6-10	Asteraceae
	Solidago nemoralis	6-11	Asteraceae
	S. petiolaris	5-11	Asteraceae
	Sonchus asper	5-10	Asteraceae
	S. oleraceus	6-10	Asteraceae
	Tragopogon dubius	4-10	Asteraceae
72.	Crotalaria sagittalis	5-9	Fabaceae
	Kichxia elatine	5-10	Scrophulariaceae
	Linaria vulgaris	5-11	Scrophulariaceae
74.	Rorippa spp	4-10	Brassicaceae
	Ludwigia alternifolia	6-8	Onagraceae

	Oenthera linifolia	5-7	Onagraceae
	O. missouriensis	5-8	Onagraceae
75.	Asclepias tuberosa	5-10	Asclepiadaceae
	Linum spp	5-9	Linaceae
	Abutilon theophrasti	6-10	Malvaceae
	Ludwigia peploides	5-10	Onagraceae
	Portulaca oleracea	6-11	Portulacaceae
	Verbascum thapsus	5-9	Scrophulariaceae
76.	Heteranthera dubia	6-10	Pontederiaceae
77.	Passiflora lutea	6-9	Passifloraceae
81.	Brickellia grandiflora	7-10	Asteraceae
	Grindelia lanceolata	6-10	Asteraceae
	Helenium autumnale	8-11	Asteraceae
	H. flexuosum	6-11	Asteraceae
	Helianthus annuus	6-11	Asteraceae
	H. grosseserratus	7-10	Asteraceae
	H. tuberosus	8-10	Asteraceae
	Heterotheca latifolia	7-8	Asteraceae
	Lactuca scariola	6-10	Asteraceae
	Prenanthes aspera	8-9	Asteraceae
	Pyrrhopappus carolinianus	5-10	Asteraceae
	Rudbeckia fulgida	8-10	Asteraceae
	R. hirta	5-9	Asteraceae
	R. subtomentosa	7-10	Asteraceae
	R. triloba	6-11	Asteraceae
	Solidago altissima	8-11	Asteraceae
	S. gigantea	7-10	Asteraceae
	S. hispida	7-10	Asteraceae
	S. petiolaris	5-11	Asteraceae
	S. rigida	8-10	Asteraceae
	S. rugosa	8-10	Asteraceae
	S. ulmifolia	7-11	Asteraceae
	Sonchus asper	5-10	Asteraceae
	S. oleraceus	6-10	Asteraceae
	Verbesina alternifolia	8-10	Asteraceae
	V. helianthoides	5-10	Asteraceae
82.	Impatiens pallida	5-10	Balsaminaceae
	Kichxia elatine	5-10	Scrophulariaceae
84.	Erysimum capitatum	4-7	Brassicaceae
	Rorippa spp	4-10	Brassicaceae
	Ludwiga alternifolia	6-8	Onagraceae
	Oenothera biennis	6-10	Onagraceae
	O. missouriensis	5-8	Onagraceae
85.	Cucurbita foetidissima	6-7	Cucurbitaceae
	Mentzelia oligosperma	5-9	Loasaceae
	Malvastrum hispidum	7-9	Malvaceae

JULY AND AUGUST-Yellow

	Sida spinosa	6-10	Malvaceae
	Penthorum sedoides	7-10	Saxifragaceae
	Verbascum blattaria	5-9	Scrophulariaceae
	V. thapsus	5-9	Scrophulariaceae
	Physalis spp	5-9	Solanaceae
	Solanum rostratum	5-10	Solanaceae
91.	Pastinaca sativa	4-10	Apiaceae
	Taenidia integerrima	4-7	Apiaceae
	Artemisia spp	6-11	Asteraceae
	Chrysanthemum leucanthemum	5-8	Asteraceae
	Krigia virginica	5-8	Asteraceae
	Lactuca canadensis	7-9	Asteraceae
	L. saligna	7-10	Asteraceae
	L. scariola	6-10	Asteraceae
	Matricaria matricarioides	5-10	Asteraceae
	Polymnia uvedelia	7-9	Asteraceae
	Ratibida pinnata	5-9	Asteraceae
	Rudbeckia laciniata	7-9	Asteraceae
	R. subtomentosa	7-10	Asteraceae
	Silphium laciniatum	7-9	Asteraceae
	Sonchus oleraceus	6-10	Asteraceae
	Medicago lupulina	2-12	Fabaceae
	Stylosanthes biflora	5-9	Fabaceae
	Trifolium campestre	5-9	Fabaceae
92.	Astragalus canadensis	5-8	Fabaceae
	Cassia fasciculata	6-10	Fabaceae
	C. marilandica	6-10	Fabaceae
	C. nictitans	7-9	Fabaceae
	Lotus corniculatus	5-9	Fabaceae
	Medicago lupulina	2-12	Fabaceae
	Melilotus officinale	5-10	Fabaceae
	Tephrosia virginiana	5-8	Fabaceae
	Trifolium dubium	4-10	Fabaceae
	Pedicularis lanceolata	8-11	Scrophulariaceae
94.	Brassica spp	4-10	Brassicaceae
	Rorippa spp	4-10	Brassicaceae
	Sisymbrium officinale	5-10	Brassicaceae
	Oenothera laciniata	5-10	Onagraceae
	O. linifolia	5-8	Onagraceae
95.	Taenida integerrima	4-7	Apiaceae
	Rhus glabra	5-7	Anacardiaceae
	Cassia fasciculata	6-10	Fabaceae
	C. marilandica	6-10	Fabaceae
	Hibiscus trionum	6-9	Malvaceae
	Oxalis stricta	3-10	Oxalidaceae
	Ranunculus recurvatus	5-7	Ranunculaceae
	R. scleratus	4-8	Ranunculaceae

JULY AND AUGUST-Yellow to Pink to Red

	Agrimonia spp	7-9	Rosaceae
	Potentilla norvegica	5-10	Rosaceae
	P. recta	4-8	Rosaceae
	Solanum rostratum	5-10	Solanaceae
97.	Passiflora lutea	6-9	Passifloraceae

Orange flowers

16.	Hemerocallis fulva	5-8	Liliaceae
46.	Lilium michiganense	6-7	Liliaceae
65.	Campsis radicans	5-10	Bignoniaceae
71.	Krigia biflora	4-8	Asteraceae
72.	Linaria vulgaris	5-11	Scrophulariaceae
75.	Asclepias tuberosa	5-10	Asclepiadaceae
76.	Belamcanda chinensis	7-8	Iridaceae
81.	Krigia biflora	4-8	Asteraceae
82.	Impatiens capensis	5-10	Balsaminaceae
84.	Erysimum capitatum	4-7	Brassicaceae

Pink to Red flowers

02.	Corallorhiza odontorhiza	8-10	Orchidaceae
15.	Talinum calycinum	5-8	Portulacaceae
	T. parviflorum	5-8	Portulacaceae
16.	Allium canadense	5-7	Liliaceae
	A. stellatum	7-11	Liliaceae
	A. vineale	4-7	Liliaceae
17.	Talinum calycinum	5-8	Portulacaceae
31.	Trifolium pratense	4-9	Fabaceae
35.	Oxalis violacea	3-7 & 9-11	Oxalidaceae
41.	Lechea villosa	7-11	Cistaceae
	Rotala ramosior	6-10	Lythraceae
42.	Triosteum aurantiacum	4-7	Caprifoliaceae
	T. perfoliatum	4-7	Caprifoliaceae
44.	Dipsacus sylvestris	6-10	Dipsacaceae
	Mitchella repens	5-7	Rubiaceae
45.	Apocynum androsaemifolium	5-7	Apocynaceae
	Asclepias incarnata	6-8	Asclepiadaceae
	A. quadrifolia	5-7	Asclepiadaceae
	A. syriaca	5-9	Ascelpiadaceae

JULY AND AUGUST-Pink to Red

	Symphoricarpos orbiculatus	7-8	Caprifoliaceae
	Agrostemma githago	5-9	Caryophyllaceae
	Dianthus armeria	5-10	Caryophyllaceae
	Saponaria officinalis	5-10	Caryophyllaceae
	Silene antirrhina	4-9	Caryophyllaceae
	S. regia	5-10	Caryophyllaceae
	Sabatia angularis	6-9	Gentianaceae
	Spigelia marilandica	5-8	Loganiaceae
	Mirabilis nyctaginea	5-10	Nyctaginaceae
	Phlox maculata	5-10	Polemoniaceae
	P. paniculata	7-10	Polemoniaceae
	P. pilosa	4-7 & 10-11	Polemoniaceae
	Anagallis arvensis	5-9	Primulaceae
	Gerardia gattingeri	8-10	Scrophulariaceae
	G. tenuifolia	8-10	Scrophulariaceae
46.	Cuphea petiolata	7-10	Lythraceae
51.	Eupatorium coelestinum	7-10	Asteraceae
	E. purpureum	7-9	Asteraceae
	Dipsacus sylvestis	6-10	Dipsacaceae
52.	Blephilia ciliata	5-8	Lamiaceae
	B. hirsuta	5-9	Lamiaceae
	Cunila origanoides	7-11	Lamiaceae
	Lamium amplexicaule	2-11	Lamiaceae
	L. purpureum	3-10	Lamiaceae
	Mentha spp	6-10	Lamiaceae
	Monarda fistulosa	5-8	Lamiaceae
	Stachys palustris	7-9	Lamiaceae
	S. tenuifolia	6-9	Lamiaceae
	Teucrium canadense	6-9	Lamiaceae
	Phryma leptostachya	6-9	Phrymaceae
	Scrophularia marilandica	7-10	Scrophulariaceae
53.	Physostegia virginiana	5-9	Lamiaceae
54.	Epilobium coloratum	7-10	Onagraceae
62.	Leonurus cardiaca	5-8	Lamiaceae
65.	Geranium carolinianum	5-7	Geraniaceae
	Verbena canadensis	3-11	Verbenaceae
71.	Arctium minus	7-10	Asteraceae
	Aster anomalus	7-11	Asteraceae
	A. novae-angliae	8-10	Asteraceae
	A. oblongifolius	7-11	Asteraceae
	A. patens	8-10	Asteraceae
	Boltonia asteroides	7-10	Asteraceae
	Echinacea pallida	5-7	Asteraceae
	Liatris aspera	8-11	Asteraceae
	L. cylindracea	7-9	Asteraceae
	L. squarrosa	6-9	Asteraceae

JULY AND AUGUST-Pink to Red

	Trugopogon porrifolius	5-7	Asteraceae
	Veronia altissima	8-10	Asteraceae
	V. crinata	8-10	Asteraceae
	V. missurica	7-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Lechea tenifolia	6-11	Cistaceae
	L. villosa	7-11	Cistaceae
	Polygala sanguinea	5-10	Polygalaceae
	Polygonum spp	5-11	Polygonaceae
	Rumex spp	4-9	Polygonaceae
72.	Echium vulgare	5-9	Boraginaceae
	Corallorhiza odontorhiza	8-10	Orchidaceae
74.	Gaura biennis	6-10	Onagraceae
75.	Cynoglossum officinale	5-7	Boraginaceae
	Convolvulus arvensis	5-9	Convolvulaceae
	C. sepium	5-9	Convolvulaceae
	Phytolacca americana	5-10	Phytolaccaceae
	Gerardia tenuifolia	8-10	Scrophulariaceae
76.	Allium vineale	4-7	Liliaceae
	Veratrum woodii	7-9	Liliaceae
	Lythrum alatum	6-9	Lythraceae
81.	Cirsium altissimum	7-10	Asteraceae
	Elephantopus carolinianus	8-10	Asteraceae
	Vernonia altissima	8-10	Asteraceae
	V. crinita	8-10	Asteraceae
	V. missurica	7-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Rumex spp	4-9	Polygonaceae
82.	Lobelia cardinalis	7-10	Campanulaceae
84.	Epilobium coloratum	7-10	Onagraceae
	Gaura biennis	6-10	Onagraceae
	Oenothera speciosa	5-7	Onagraceae
85.	Specularia perfoliata	4-8	Campanulaceae
	Hibiscus lasiocarpus	7-10	Malvaceae
	H. militaris	7-10	Malvaceae
91.	Carduus nutans	5-10	Asteraceae
	Cirsium discolor	8-11	Asteraceae
	C. vulgare	5-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Schrankia uncinata	5-9	Fabaceae
	Strophostyles spp	6-10	Fabaceae
	Trifolium pratense	5-9	Fabaceae
	T. reflexum	5-8	Fabaceae
	Rumex spp	4-9	Polygonaceae
	Castilleja coccinea	3-7	Scrophulariaceae

JULY AND AUGUST-Pink to Red to Violet to Blue

92.	Amphicarpa bracteata	8-9	Fabaceae
	Apios americana	6-9	Fabaceae
	Coronilla varia	5-8	Fabaceae
	Desmodium spp	6-8	Fabaceae
	Lespedeza spp	5-10	Fabaceae
	Tephrosia virginiana	5-8	Fabaceae
	Vicia spp	4-10	Fabaceae
	Castilleja coccinea	3-7	Scrophulariaceae
95.	Ipomoea lacunosa	7-10	Convolvulaceae
	Hibiscus militaris	7-10	Malvaceae
	Aquilegia canadensis	4-7	Ranunculaceae
	Rosa setigera	5-7	Rosaceae
97.	Passiflora incarnata	6-9	Passifloraceae

Violet to Blue flowers

16.	Heteranthera limosa	6-9	Pontederiaceae
	Pontederia cordata	5-11	Pontederiaceae
22.	Psoralea esculenta	4-7	Fabaceae
35.	Oxalis violacea	3-7 & 9-11	Oxalidaceae
41.	Kuhnia eupatorioides	7-10	Asteraceae
42.	Justicia americana	5-10	Acanthaceae
	Triosteum perfoliatum	4-7	Caprifoliaceae
	Hedeoma hispida	5-7	Lamiaceae
	H. pulegioides	7-9	Lamiaceae
	Prunella vulgaris	5-9	Lamiaceae
	Satureja arkansana	5-10	Lamiaceae
	Trichostema dichotomum	8-10	Lamiaceae
	Cuphea petiolata	7-10	Lythraceae
	Polygala verticillata	5-10	Polygalaceae
44.	Houstonia nigricans	5-10	Rubiaceae
45.	Ruellia humilis	5-10	Acanthaceae
	R. pedunculata	5-9	Acanthaceae
	R. strepens	5-10	Acanthaceae
	Asclepias sullivantii	6-7	Asclepiadaceae
	A. viridiflora	5-8	Asclepiadaceae
	Gentiana quinquefolia	8-11	Gentianaceae
	Isanthus brachiatus	7-10	Lamiaceae
	Trichostema dichotomum	8-10	Lamiaceae
	Linum usitatissemum	5-9	Linaceae
	Mirabilis nyctaginea	5-10	Nyctaginaceae
	Phlox maculatum	5-10	Polemoniaceae
	P. paniculata	7-10	Polemoniaceae
	P. pilosa	4-7 & 10-11	Polemoniaceae
	Anagallis arvensis	5-9	Primulaceae

	Gerardia tenuifolia	8-10	Scrophulariaceae
	Lindernia analgallidea	6-10	Scrophulariaceae
51.	Eupatorium coelestinum	7-10	Asteraceae
	E. purpureum	7-9	Asteraceae
	Kuhnia eupatorioides	7-10	Asteraceae
	Lycopus spp	6-10	Lamiaceae
	Veronicastrum virginicum	6-9	Scrophulariaceae
52.	Blephilia ciliata	5-8	Lamiaceae
	B. hirsuta	5-9	Lamiaceae
	Glechoma hederacea	3-7	Lamiaceae
	Hedeoma hispida	5-7	Lamiaceae
	H. pulegioides	7-9	Lamiaceae
	Lamium amplexicaule	2-11	Lamiaceae
	L. purpureum	3-10	Lamiaceae
	Leonurus cardiaca	5-8	Lamiaceae
	Mentha spp	6-10	Lamiaceae
	Monarda fistulosa	5-8	Lamiaceae
	Physostegia virginiana	5-9	Lamiaceae
	Prunella vulgaris	5-9	Lamiaceae
	Scutellaria incana	6-9	Lamiaceae
	S. lateriflora	6-10	Lamiaceae
	S. ovata	5-10	Lamiaceae
	S. parvula	5-7	Lamiaceae
	Stachys palustris	7-9	Lamiaceae
	Teucrium canadense	6-9	Lamiaceae
	Veronica spp	3-8	Scrophulariaceae
	Mimulus alatus	6-9	Scrophulariaceae
	M. ringens	6-9	Scrophulariaceae
	Veronica spp	3-8	Scrophulariaceae
	Lippia lanceolata	5-10	Verbenaceae
	Verbena simplex	5-9	Verbenaceae
	V. stricta	5-9	Verbenaceae
55.	Heliotropium indicum	7-11	Boraginaceae
	Mentha spp	6-10	Lamiaceae
	Lindernia analgallidea	6-10	Scrophulariaceae
	Verbena hastata	6-10	Verbenaceae
	V. simplex	5-9	Verbenaceae
	V. stricta	5-9	Verbenaceae
61.	Aralia racemosa	6-8	Araliaceae
62.	Leonurus cardiaca	5-8	Lamiaceae
	Conobea multifida	5-10	Scrophulariaceae
65.	Verbena canadensis	3-11	Verbenaceae
71.	Arctium minus	7-10	Asteraceae
	Aster anomalus	7-11	Asteraceae
	A. azureus	8-11	Asteraceae

JULY AND AUGUST-Violet to Blue

	A. laevis	8-10	Asteraceae
	A. linariifolius	8-10	Asteraceae
	A. novae-angliae	8-10	Asteraceae
	A. oblongifolius	7-11	Asteraceae
	A. patens	8-10	Asteraceae
	A. sericeus	8-10	Asteraceae
	A. turbinellus	8-11	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Kuhnia eupatorioides	7-10	Asteraceae
	Liatris cylindracea	7-9	Asteraceae
	L. pycnostachya	7-10	Asteraceae
	L. squarrosa	6-9	Asteraceae
	Tragopogon porrifolius	5-7	Asteraceae
	Vernonia altissima	8-10	Asteraceae
	V. crinata	7-10	Asteraceae
	V. missurica	7-10	Asteraceae
	Lechea villosa	7-11	Cistaceae
72.	Echium vulgare	5-9	Boraginaceae
	Commelina communis	5-10	Commelinaceae
	Pontederia cordata	6-10	Pontederiaceae
	Kickxia elatine	5-10	Scrophulariaceae
	Linaria canadensis	4-9	Scrophulariaceae
73.	Tradescantia ohiensis	5-7	Commelinaceae
	T. subaspera	6-9	Commelinaceae
75.	Heliotropium indicum	7-11	Boraginaceae
	Linum usitatissimum	5-9	Linaceae
76.	Veratrum woodii	7-9	Liliaceae
	Lythrum alatum	6-9	Lythraceae
	Heteranthera limosa	6-9	Pontederiaceae
	Pontederia cordata	5-11	Pontederiaceae
81.	Aster cordifolius	8-11	Asteraceae
	A. drummondii	8-10	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Echinacea purpurea	5-10	Asteraceae
	Elephantopus carolinianus	8-10	Asteraceae
	Erigeron annuus	5-11	Asteraceae
	Kuhnia eupatorioides	7-10	Asteraceae
	Lactuca floridana	8-10	Asteraceae
	Vernonia altissima	8-10	Asteraceae
	V. baldwinii	5-10	Asteraceae
	V. crinata	7-10	Asteraceae
	V. missurica	7-10	Asteraceae
82.	Lobelia inflata	6-10	Campanulaceae
	L. siphilitica	8-10	Campanulaceae
	L. spicata	5-8	Campanulaceae

JULY AND AUGUST-Violet to Blue to Green

85.	Campanula americana	6-10	Campanulaceae
	Specularia perfoliata	4-8	Campanulaceae
	Hydrophyllum appendiculatum	4-7	Hydrophyllaceae
	H. canadense	5-7	Hydrophyllaceae
	Datura stramonium	5-10	Solanaceae
	Solanum americanum	5-11	Solanaceae
	S. carolinense	5-10	Solanaceae
91.	Carduus nutans	5-10	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Lactuca floridana	8-10	Asteraceae
	Petalostemon purpureum	5-9	Fabaceae
	Psoralea esculenta	4-7	Fabaceae
	P. onobrychis	5-9	Fabaceae
	P. psoralioides	5-7	Fabaceae
	P. tenuiflora	5-9	Fabaceae
92.	Amorpha canescens	5-8	Fabaceae
	Amphicarpa bracteata	8-9	Fabaceae
	Apios americana	6-9	Fabaceae
	Clitoria mariana	5-9	Fabaceae
	Desmodium spp	6-10	Fabaceae
	Lespedeza spp	5-10	Fabaceae
	Vicia spp	4-10	Fabaceae
95.	Ipomoea hederacea	7-10	Convolvulaceae
	Hydrophyllum appendiculatum	4-7	Hydrophyllaceae
	H. canadense	5-7	Hydrophyllaceae
	H. virginianum	4-7	Hydrophyllaceae

Green flowers

02.	Spiranthes lacera	8-10	Orchidaceae
11.	Acorus calamus	5-7	Araceae
	Plantago spp	4-11	Plantaginaceae
12.	Spiranthes lacera	8-10	Orchidaceae
16.	Agave virginica	6-8	Amaryllidaceae
21.	Plantago spp	4-11	Plantaginaceae
25.	Heuchera richardsonii	4-7	Saxifragaceae
41.	Euphorbia supina	5-10	Euphorbiaceae
	Polygala verticillata	5-10	Polygalaceae
44.	Galium spp	4-9	Rubiaceae
45.	Apocynum cannabinum	5-8	Apocynaceae
	Asclepias hirtella	5-8	Asclepiadaceae
	A. verticillata	5-9	Asclepiadaceae
	A. viridiflora	5-8	Asclepiadaceae

JULY AND AUGUST-Green

	Symphoricarpos orbiculatus	7-8	Caprifoliaceae
51.	Brickellia grandiflora	7-10	Asteraceae
	Iva ciliata	7-10	Euphorbiaceae
	Euphorbia dentata	7-10	Euphorbiaceae
	E. maculata	5-10	Euphorbiaceae
	E. supina	5-10	Euphorbiaceae
	Boehmeria cylindrica	6-10	Urticaceae
	Pilea pumila	7-10	Urticaceae
	Urtica dioica	5-10	Urticaceae
52.	Scrophularia marilandica	7-10	Scrophulariaceae
61.	Ambrosia artemisifolia	7-11	Asteraceae
	Euphorbia heterophylla	7-10	Asteraceae
62.	Conobea multifida	5-10	Scrophulariaceae
65.	Panax quinqufolius	6-7	Araliaceae
	Anemone virginiana	4-8	Ranunculaceae
71.	Amaranthus spp	6-10	Amaranthaceae
	Artemisia spp	6-11	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Croton spp	5-10	Euphorbiaceae
	Crotonopsis spp	6-9	Euphorbiaceae
	Euphorbia heterophylla	7-10	Euphorbiaceae
	Rumex spp	4-9	Polygonaceae
	Parietaria pensylvanica	5-10	Urticaceae
76.	Allium vineale	4-7	Liliaceae
	Menispermum canadense	5-7	Menispermaceae
81.	Artemisia spp	6-11	Asteraceae
	Brickellia grandiflora	7-10	Asteraceae
	Cacalia atriplicifolia	6-10	Asteraceae
	C. muhlenbergii	5-9	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	Xanthium spp	8-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Acalypha spp	6-10	Euphorbiaceae
	Euphorbia heterophylla	7-10	Euphorbiaceae
	Menispermum canadense	5-7	Menispermaceae
	Rumex spp	4-9	Polygonaceae
85.	Heuchera richardsonii	4-7	Saxifragaceae
	Penthorum sedoides	7-10	Saxifragaceae
	Vitis spp	5-7	Vitaceae
86.	Menispermum canadense	5-7	Menispermaceae
91.	Ambrosia artemisifolia	7-11	Asteraceae

JULY AND AUGUST-Green to Brown

	A. trifida	7-9	Asteraceae
	Artemisia spp	6-11	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Euphorbia heterophylla	7-10	Euphorbiaceae
	Desmanthus illinoensis	6-8	Fabaceae
	Rumex spp	4-9	Polygonaceae
95.	Rhus glabra	5-7	Anacardiaceae
	Aralia racemosa	6-8	Araliaceae
	Parthenocissus quinquefolia	5-8	Vitaceae
97.	Passiflora lutea	6-9	Passifloraceae

Brown flowers

11.	Typha spp	5-8	Typhaceae
42.	Triosteum perfoliatum	4-7	Caprifoliaceae
55.	Scrophularia marilandica	7-10	Scrophulariaceae
72.	Aristolochia serpentaria	5-7	Aristolochiaceae
81.	Acalypha spp	6-10	Euphorbiaceae
92.	Apios americana	6-9	Fabaceae

SEPTEMBER TO NOVEMBER

White or whitish flowers

02.	Corallorhiza odontorhiza	8-10	Orchidaceae
	Spiranthes cernua	8-10	Orchidaceae
	S. lacera	8-10	Orchidaceae
04.	Monotropa uniflora	8-10	Pyrolaceae
05.	Cuscuta spp	7-10	Convolvulaceae
	Monotropa uniflora	8-10	Pyrolaceae
11.	Plantago spp	4-11	Plantaginaceae
12.	Spiranthes cernua	8-10	Orchidaceae
	S. lacera	8-10	Orchidaceae
13.	Alisma plantago-aquatica	5-9	Alismataceae
	Echinodorus cordifolius	6-9	Alismataceae
	Sagittaria engelmanniana	6-9	Alismataceae
	S. latifolia	6-9	Alismataceae
	S. montevidensis	6-9	Alismataceae

SEPTEMBER TO NOVEMBER-White

16.	Nothoscordum bivalve	3-5 & 10-11	Liliaceae
	Heteranthera limosa	6-9	Pontederiaceae
27.	Linaria canadensis	4-9	Scrophulariaceae
31.	Trifolium repens	4-10	Fabaceae
41.	Froelichia gracilis	5-9	Amaranthaceae
	Iresine rhizomatosa	8-10	Amaranthaceae
	Eclipta alba	7-10	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Euphorbia supina	5-10	Euphorbiaceae
	Pycnanthemum albescens	7-9	Lamiaceae
	Rotala ramosior	6-10	Lythraceae
	Polygala verticillata	5-10	Polygalaceae
42.	Justicia americana	5-10	Acanthaceae
	Pycnanthemum pilosum	8-9	Lamiaceae
	P. tenuifolium	6-9	Lamiaceae
	Gratiola spp	4-10	Scrophulariaceae
44.	Justicia americana	5-10	Acanthaceae
	Diodia teres	6-10	Rubiaceae
	Galium spp	4-9	Rubiaceae
	Houstonia longifolia	4-7 & 10	Rubiaceae
	H. nigricans	5-10	Rubiaceae
	Spermacoce glabra	6-10	Rubiaceae
45.	Mollugo verticillata	5-11	Aizoaceae
	Asclepias verticillata	5-9	Asclepiadaceae
	Cynanchum laeve	7-9	Asclepiadaceae
	Cerastium spp	3-11	Caryophyllaceae
	Saponaria officinalis	5-10	Caryophyllaceae
	Silene stellata	5-9	Caryophyllaceae
	Stellaria media	1-12	Caryophyllaceae
	Euphorbia corollata	5-10	Euphorbiaceae
	Phlox pilosa	4-7 & 10-11	Polemoniaceae
	Lindernia analgallidea	6-10	Scrophulariaceae
47.	Cerastium spp	3-11	Caryophyllaceae
	Stellaria media	1-12	Caryophyllaceae
51.	Eclipta alba	7-10	Asteraceae
	Eupatorium altissimum	8-10	Asteraceae
	E. perfoliatum	7-10	Asteraceae
	E. purpureum	7-9	Asteraceae
	E. rugosum	7-10	Asteraceae
	E. serotinum	8-10	Asteraceae
	Galinsoga ciliata	5-11	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Euphorbia maculata	5-10	Euphorbiaceae
	E. supina	5-10	Euphorbiaceae
	Lycopus spp	6-10	Lamiaceae
	Veronicastrum virginicum	6-9	Scrophulariaceae

SEPTEMBER TO NOVEMBER-White

52.	Cunila origanoides	7-11	Lamiaceae
	Lycopus spp	6-10	Lamiaceae
	Marrubium vulgare	5-9	Lamiaceae
	Perilla frutescens	8-10	Lamiaceae
	Scutellaria lateriflora	6-10	Lamiaceae
	Gratiola spp	4-10	Scrophulariaceae
55.	Perilla frutescens	8-10	Lamiaceae
	Lindernia analgallidea	6-10	Scrophulariaceae
	Verbena urticifolia	6-10	Verbenaceae
61.	Polymnia canadensis	5-10	Asteraceae
62.	Perilla frutescens	8-10	Lamiaceae
	Conobea multifida	5-10	Scrophulariaceae
71.	Aster ericoides	7-10	Asteraceae
	A. pilosus	8-11	Asteraceae
	A. simplex	8-10	Asteraceae
	Erigeron canadensis	6-11	Asteraceae
	E. strigosus	5-9	Asteraceae
	Gnaphalium obtusifolium	7-11	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Liatris pychostachya	7-10	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	P. aspera	8-9	Asteraceae
	Polygonum spp	5-11	Polygonaceae
	Saururus cernuus	5-9	Saururaceae
72.	Corallorhiza odontorhiza	8-10	Orchidaceae
	Spiranthes cernua	8-11	Orchidaceae
74.	Capsella bursa-pastoris	1-12	Brassicaeae
	Gaura biennis	6-10	Onagraceae
	Spermacoce glabra	6-10	Rubiaceae
75.	Convolvulus arvensis	5-9	Convolvulaceae
	C. sepium	5-9	Convolvulaceae
	Ipomoea lacunosa	7-10	Convolvulaceae
	I. pandurata	5-9	Convolvulaceae
	Euphorbia corollata	5-10	Euphorbiaceae
	Phytolacca americana	5-10	Phytolaccaceae
	Solanum americanum	5-9	Solanaceae
76.	Heteranthera limosa	6-9	Pontederiaceae
81.	Aster lateriflorus	8-11	Asteraceae
	A. sagittifolius	8-11	Asteraceae
	A. simplex	8-10	Asteraceae
	Cacalia atriplicifolia	6-10	Asteraceae
	C. muhlenbergii	5-10	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Erechtites hieracifolia	7-11	Asteraceae
	Erigeron annus	5-11	Asteraceae

	E. canadensis	6-11	Asteraceae
	E. strigosus	5-9	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Kuhnia eupatorioides	7-10	Asteraceae
	Parthenium hispidum	4-10	Asteraceae
	P. integrifolium	4-9	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	P. aspera	8-9	Asteraceae
	Verbesina virginica	8-10	Asteraceae
82.	Lobelia inflata	6-10	Campanulaceae
	Marrubium vulgare	5-9	Lamiaceae
84.	Capsella bursa-pastoris	1-12	Brassicaeae
	Lepidium campestre	4-9	Brassicaeae
	L. virginicum	2-11	Brassicaeae
	Gaura biennis	6-10	Onagraceae
	Epilobium coloratum	7-10	Onagraceae
85.	Ipomoea lacunosa	7-10	Convolvulaceae
	Sicyos angulatus	7-10	Cucurbitaceae
	Hibiscus lasiocarpus	7-10	Malvaceae
	Ceanothus americanus	5-11	Rhamnaceae
	Verbascum blattaria	5-9	Scrophulariaceae
	Datura stramonium	5-10	Solanaceae
	Solanum americanum	5-9	Solanaceae
	S. carolinense	4-10	Solanaceae
91.	Cicuta maculata	5-9	Apiaceae
	Daucus carota	5-10	Apiaceae
	Achillea millefolium	4-11	Asteraceae
	Anthemis cotula	5-11	Asteraceae
	Carduus nutans	5-10	Asteraceae
	Chrysanthemum leucathemum	5-10	Asteraceae
	Matricaria chamomilla	5-10	Asteraceae
	Polymnia canadensis	5-10	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	Petalostemum candidum	5-9	Fabaceae
	Psoralea onobrychis	5-9	Fabaceae
	Strophostyles spp	6-10	Fabaceae
	Trifolium pratense	5-9	Fabaceae
	T. repens	4-10	Fabaceae
92.	Amphicarpa bracteata	8-9	Fabaceae
	Desmodium spp	6-10	Fabaceae
	Lespedeza spp	5-10	Fabaceae
	Melilotus albus	5-10	Fabaceae
	Vicia spp	4-9	Fabaceae
94.	Capsella bursa-pastoris	1-12	Brassicaceae
	Nasturtium officinale	4-10	Brassicaceae
	Sibara virginica	3-5 & 10-11	Brassicaceae

	Polanisia dodecandra	5-10	Capparaceae
	Clematis spp	5-9	Ranunculaceae
95.	Rhus copallina	5-11	Anacardiaceae
	Geum canadense	5-11	Rosaceae
97.	Passiflora incarnata	6-9	Passifloraceae

Yellow flowers

16.	Heteranthera dubia	6-10	Pontederiaceae
17.	Nelumbo lutea	6-9	Nymphaeaceae
	Nuphar luteum	6-10	Nymphaeaceae
21.	Silphium terebinthinaceum	7-10	Asteraceae
31.	Taraxacum officinale	1-12	Asteraceae
41.	Coreopsis pubescens	5-10	Asteraceae
	Silphium integrifolium	7-9	Asteraceae
44.	Ascyrum hypericoides	5-10	Hypericaceae
45.	Hypericum drummondii	6-9	Hypericaceae
	H. gentianoides	7-10	Hypericaceae
	H. multilum	7-10	Hypericaceae
	H. perforatum	5-9	Hypericaceae
	H. punctatum	6-9	Hypericaceae
	H. spathulatum	6-9	Hypericaceae
	H. sphaerocarpum	5-9	Hypericaceae
	Linum spp	5-9	Linaceae
	Lysimachia spp	5-9	Primulaceae
	Seymaria macrophylla	6-9	Scrophulariaceae
51.	Bidens cernua	8-10	Asteraceae
	Brickellia grandiflora	7-10	Asteraceae
	Helianthus hirsutus	7-10	Asteraceae
	H. mollis	7-10	Asteraceae
	H. tuberosus	8-10	Asteraceae
	Heliopsis helianthoides	5-10	Asteraceae
	Polymnia uvedalia	7-9	Asteraceae
	Silphium integrifolium	7-9	Asteraceae
	S. perfoliatum	7-9	Asteraceae
52.	Agastache nepetoides	7-9	Lamiaceae
	Pedicularis lanceolata	8-10	Scrophulariaceae
55.	Mentzelia oligosperma	5-9	Loasaceae
	Abutilon theophrasti	6-10	Malvaceae
	Agrimonia spp	7-9	Rosaceae
	Gerardia flava	6-9	Scrophulariaceae
61.	Bidens bipinnata	8-10	Asteraceae
	B. polylepis	8-10	Asteraceae

SEPTEMBER TO NOVEMBER-Yellow

	Coreopsis pubescens	5-10	Asteraceae
	C. tripteris	7-9	Asteraceae
	Matricaria matricarioides	5-10	Asteraceae
	Polymnia uvedalia	7-9	Asteraceae
65.	Gerardia grandiflora	7-9	Scrophulariaceae
	G. pedicularis	8-9	Scrophulariaceae
	Seymaria macrophylla	6-9	Scrophulariaceae
71.	Chrysopsis villosa	6-10	Asteraceae
	Helenium amarum	6-11	Asteraceae
	H. autumnale	8-11	Asteraceae
	H. flexuosum	6-11	Asteraceae
	Helianthus maximilianii	7-10	Asteraceae
	Heterotheca latifolia	8-11	Asteraceae
	Hieracium gronovii	5-10	Asteraceae
	H. longipilum	7-9	Asteraceae
	H. scabrum	6-9	Asteraceae
	Lactuca canadensis	7-9	Asteraceae
	Rudbeckia missouriensis	6-10	Asteraceae
	Solidago nemoralis	6-11	Asteraceae
	S. petiolaris	5-11	Asteraceae
	Sonchus asper	5-10	Asteraceae
	S. oleraceus	6-10	Asteraceae
	Tragopogon dubius	4-10	Asteraceae
72.	Crotalaria sagittalis	5-9	Fabaceae
	Kickxia elatine	5-10	Scrophulariaceae
	Linaria vulgaris	5-11	Scrophulariaceae
74.	Rorippa spp	4-10	Brassicaeae
75.	Asclepias tuberosa	5-10	Asclepiadaceae
	Linum spp	5-9	Linaceae
	Abutilon theophrasti	6-10	Malvaceae
	Ludwigia peploides	5-10	Onagraceae
	Portulaca oleracea	6-11	Portulacaceae
	Verbascum thapsus	5-9	Scrophulariaceae
76.	Heteranthera dubia	6-10	Pontederiaceae
77.	Passiflora lutea	6-9	Passifloraceae
81.	Brickellia grandiflora	7-10	Asteraceae
	Grindelia lanceolata	6-10	Asteraceae
	Helenium autumnale	8-11	Asteraceae
	H. flexuosum	6-11	Asteraceae
	Helianthus annuus	6-11	Asteraceae
	H. grosseserratus	7-10	Asteraceae
	H. tuberosus	8-10	Asteraceae
	Lactuca scariola	6-10	Asteraceae
	Prenanthes aspera	8-9	Asteraceae
	Pyrrhopappus carolinianus	5-10	Asteraceae

SEPTEMBER TO NOVEMBER·Yellow

	Rudbeckia fulgida	8-10	Asteraceae
	R. hirta	5-9	Asteraceae
	R. subtomentosa	7-10	Asteraceae
	R. triloba	6-11	Asteraceae
	Solidago altissima	8-11	Asteraceae
	S. drummondii	9-11	Asteraceae
	S. gigantea	7-10	Asteraceae
	S. hispida	7-10	Asteraceae
	S. petiolaris	5-11	Asteraceae
	S. rigida	8-10	Asteraceae
	S. rugosa	8-10	Asteraceae
	S. ulmifolia	7-11	Asteraceae
	Sonchus asper	5-10	Asteraceae
	S. oleraceus	6-10	Asteraceae
	Verbesina alternifolia	8-10	Asteraceae
	V. helianthoides	5-10	Asteraceae
82.	Impatiens pallida	5-10	Balsaminaceae
	Kickxia elatine	5-10	Scrophulariaceae
84.	Rorippa spp	4-10	Brassicaceae
	Oenothera biennis	6-10	Onagraceae
85.	Mentzelia oligosperma	5-9	Loasaceae
	Malvastrum hispidum	7-9	Malvaceae
	Sida spinosa	6-10	Malvaceae
	Penthorum sedoides	7-10	Saxifragaceae
	Verbascum blattaria	5-9	Scrophulariaceae
	V. thapsus	5-10	Scrophulariaceae
	Physalis spp	5-9	Solanaceae
	Solanum rostratum	5-10	Solanaceae
91.	Pastinaca sativa	4-10	Apiaceae
	Artemesia spp	6-11	Asteraceae
	Lactuca canadensis	7-9	Asteraceae
	L. saligna	7-10	Asteraceae
	L. scariola	6-10	Asteraceae
	Matricaria matricarioides	5-10	Asteraceae
	Polymnia uvedelia	7-9	Asteraceae
	Ratibida pinnata	5-9	Asteraceae
	Rudbeckia laciniata	7-9	Asteraceae
	R. subtomentosa	7-10	Asteraceae
	Silphium laciniatum	7-9	Asteraceae
	Sonchus oleraceus	6-10	Asteraceae
	Medicago lupulina	2-12	Fabaceae
	Stylosanthes biflora	5-9	Fabaceae
	Trifolium campestre	4-9	Fabaceae
92.	Cassia fasciculata	6-10	Fabaceae
	C. marilandica	6-10	Fabaceae
	C. nictitans	7-9	Fabaceae

SEPTEMBER TO NOVEMBER-Yellow to Pink to Red

	Lotus corniculatus	5-9	Fabaceae
	Medicago lupulina	2-12	Fabaceae
	Melilotus officinalis	5-10	Fabaceae
	Trifolium dubium	4-10	Fabaceae
	Pedicularis lanceolata	8-11	Scrophulariaceae
94.	Brassica spp	4-10	Brassicaceae
	Rorippa spp	4-10	Brassicaceae
	Sisymbrium officinale	5-10	Brassicaceae
	Oenothera laciniata	5-10	Onagraceae
95.	Cassia fasciculata	6-10	Fabaceae
	C. marilandica	6-10	Fabaceae
	Hibiscus trionum	6-9	Malvaceae
	Oxalis stricta	3-10	Oxalidaceae
	Agrimonia spp	7-9	Rosaceae
	Potentilla norvegica	5-10	Rosaceae
	Solanum rostratum	5-10	Solanaceae
97.	Passiflora lutea	6-9	Passifloraceae

Orange flowers

65.	Campsis radicans	5-10	Bignoniaceae
72.	Linaria vulgaris	5-11	Scrophulariaceae
75.	Asclepias tuberosa	5-10	Asclepiadaceae
82.	Impatiens capensis	5-10	Balsaminaceae

Pink to Red flowers

02.	Corallorhiza odontorhiza	8-10	Orchidaceae
16.	Allium stellatum	7-11	Liliaceae
31.	Trifolium pratense	4-9	Fabaceae
35.	Oxalis violacea	3-7 & 9-11	Oxalidaceae
41.	Lechea villosa	7-11	Cistaceae
	Rotala ramosior	6-10	Lythraceae
44.	Dipsacus sylvestris	6-10	Dipsacaceae
45.	Asclepias syriaca	5-9	Asclepiadaceae
	Agrostemma githago	5-9	Caryophyllaceae
	Dianthus armeria	5-10	Caryophyllaceae
	Saponaria officinalis	5-10	Caryophyllaceae
	Silene antirrhina	4-9	Caryophyllaceae
	S. regia	5-10	Caryophyllaceae
	Sabatia angularis	6-9	Gentianaceae
	Mirabilis nyctaginea	5-10	Nyctaginaceae
	Phlox maculata	5-10	Polemoniaceae

	P. paniculata	7-10	Polemoniaceae
	P. pilosa	4-7 & 10-11	Polemoniaceae
	Anagallis arvensis	5-9	Primulaceae
	Gerardia gattingeri	8-10	Scrophulariaceae
	G. tenuifolia	8-10	Scrophulariaceae
46.	Cuphea petiolata	7-10	Lythraceae
51.	Eupatorium coelestinum	7-10	Asteraceae
	E. purpureum	7-9	Asteraceae
	Dipsacus sylvestris	6-10	Dipsacaceae
52.	Blephilia hirsuta	5-9	Lamiaceae
	Cunila origanoides	7-11	Lamiaceae
	Lamium amplexicaule	2-11	Lamiaceae
	L. purpureum	3-10	Lamiaceae
	Mentha spp	6-10	Lamiaceae
	Stachys palustris	7-9	Lamiaceae
	S. tenuifolia	6-9	Lamiaceae
	Teucrium canadense	6-9	Lamiaceae
	Phryma leptostachya	6-9	Phrymaceae
	Scrophularia marilandica	7-10	Scrophulariaceae
53.	Physostegia virginiana	5-9	Lamiaceae
54.	Epilobium coloratum	7-10	Onagraceae
65.	Verbena canadensis	3-11	Verbenaceae
71.	Arctium minus	7-10	Asteraceae
	Aster anomalus	7-11	Asteraceae
	A. novae-angliae	8-10	Asteraceae
	A. oblongifolius	7-11	Asteraceae
	A. patens	8-10	Asteraceae
	Boltonia asteroides	7-10	Asteraceae
	Liatris aspera	8-11	Asteraceae
	L. squarrosa	6-9	Asteraceae
	L. cylindracea	7-9	Asteraceae
	Vernonia altissima	8-10	Asteraceae
	V. crinata	8-10	Asteraceae
	V. missurica	7-10	Asteraceae
	Lechea tenuifolia	6-11	Cistaceae
	L. villosa	7-11	Cistaceae
	Chenopodium spp	5-11	Chenopodiaceae
	Polygala sanguinea	5-10	Polygalaceae
	Polygonum spp	5-11	Polygonaceae
	Rumex spp	4-9	Polygonaceae
72.	Echium vulgare	5-9	Boraginaceae
	Corallorhiza odontorhiza	8-10	Orchidaceae
74.	Gaura biennis	6-10	Onagraceae
75.	Convolvulus arvensis	5-9	Convolvulaceae

SEPTEMBER TO NOVEMBER-Pink to Red to Violet to Blue

	C. sepium	5-9	Convolvulaceae
	Phytolacca americana	5-10	Phytolaccaceae
	Gerardia tenuifolia	8-10	Scrophulariaceae
76.	Veratrum woodii	7-9	Liliaceae
	Lythrum alatum	6-9	Lythraceae
81.	Cirsium altissimum	7-10	Asteraceae
	Elephantopus carolinianus	8-10	Asteraceae
	Vernonia altissima	8-10	Asteraceae
	V. crinita	8-10	Asteraceae
	V. missurica	7-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Rumex spp	4-9	Polemoniaceae
82.	Lobelia cardinalis	7-10	Campanulaceae
84.	Epilobium coloratum	7-10	Onagraceae
	Gaura biennis	6-10	Onagraceae
85.	Hibiscus lasiocarpus	7-10	Malvaceae
	H. militaris	7-10	Malvaceae
91.	Carduus nutans	5-10	Asteraceae
	Cirsium discolor	8-11	Asteraceae
	C. vulgare	5-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Schrankia uncinata	5-9	Fabaceae
	Strophostyles spp	6-10	Fabaceae
	Trifolium pratense	5-9	Fabaceae
	Rumex spp	4-9	Polygonaceae
92.	Apios americana	6-9	Fabaceae
	Amphicarpa bracteata	8-9	Fabaceae
	Lespedeza spp	5-10	Fabaceae
	Vicia spp	4-10	Fabaceae
95.	Ipomoea lacunosa	7-10	Convolvulaceae
	Hibiscus militaris	7-10	Malvaceae
97.	Passiflora incarnata	6-9	Passifloraceae

Violet to Blue flowers

16.	Heteranthera limosa	6-9	Pontederiaceae
	Pontederia cordata	5-11	Pontederiaceae
22.	Viola papilionacea	3-6 & 10-11	Violaceae
25.	Viola papilionacea	3-6 & 10-11	Violaceae
32.	Viola pedata	3-6 & 9-11	Violaceae
35.	Oxalis violacea	3-7 & 9-11	Oxalidaceae
41.	Kuhnia eupatorioides	7-10	Asteraceae

SEPTEMBER TO NOVEMBER-Violet to Blue

42.	Justicia americana	5-10	Acanthaceae
	Hedeoma pulegioides	7-9	Lamiaceae
	Prunella vulgaris	5-10	Lamiaceae
	Satureja arkansana	5-10	Lamiaceae
	Trichostema dichotomum	8-10	Lamiaceae
	Cuphea petiolata	7-10	Lythraceae
	Polygala verticillata	5-10	Polygalaceae
44.	Houstonia nigricans	5-10	Rubiaceae
45.	Ruellia humilis	5-10	Acanthaceae
	R. pedunculata	5-9	Acanthaceae
	R. strepens	5-10	Acanthaceae
	Gentiana puberulenta	9-11	Gentianaceae
	G. quinquefolia	8-11	Gentianaceae
	Isanthus brachiatus	7-10	Lamiaceae
	Linum spp	5-9	Linaceae
	Mirabilis nyctaginea	5-10	Nyctaginaceae
	Phlox maculatum	5-10	Polemoniaceae
	P. paniculata	7-10	Polemoniaceae
	P. pilosa	4-7 & 10-11	Polemoniaceae
	Anagallis arvensis	5-9	Primulaceae
	Gerardia tenuifolia	8-10	Scrophulariaceae
	Lindernia analgallidea	6-10	Scrophulariaceae
51.	Eupatorium coelestinum	7-10	Asteraceae
	E. purpureum	7-9	Asteraceae
	Kuhnia eupatorioides	7-10	Asteraceae
	Lycopus spp	6-10	Lamiaceae
	Veronicastrum virginicum	6-9	Scrophulariaceae
52.	Blephilia hirsuta	5-9	Lamiaceae
	Hedeoma pulegioides	7-9	Lamiaceae
	Lamium amplexicaule	2-11	Lamiaceae
	L. purpureum	3-10	Lamiaceae
	Mentha spp	6-10	Lamiaceae
	Physostegia virginiana	5-9	Lamiaceae
	Prunella vulgaris	5-9	Lamiaceae
	Scutellaria incana	6-9	Lamiaceae
	S. lateriflora	6-10	Lamiaceae
	S. ovata	5-10	Lamiaceae
	Stachys palustris	7-9	Lamiaceae
	Teucrium canadense	6-9	Lamiaceae
	Mimulus alatus	6-9	Scrophulariaceae
	M. ringens	6-9	Scrophulariaceae
	Lippia lanceolata	5-10	Verbenaceae
	Verbena simplex	5-9	Verbenaceae
	V. stricta	5-9	Verbenaceae
55.	Heliotropium indicum	7-11	Boraginaceae
	Mentha spp	6-10	Lamiaceae

	Lindernia analgallidea	6-10	Scrophulariaceae
	Verbena hastata	6-10	Verbenaceae
	V. simplex	5-9	Verbenaceae
	V. stricta	5-9	Verbenaceae
62.	Conobea multifida	5-10	Scrophulariaceae
65.	Verbena canadensis	3-11	Verbenaceae
71.	Arctium minus	7-10	Asteraceae
	Aster anomalus	7-11	Asteraceae
	A. azureus	8-11	Asteraceae
	A. laevis	8-10	Asteraceae
	A. linariifolius	8-10	Asteraceae
	A. novae-angliae	8-10	Asteraceae
	A. oblongifolius	7-11	Asteraceae
	A. patens	8-10	Asteraceae
	A. sericeus	8-10	Asteraceae
	A. turbinellus	8-11	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Kuhnia eupatorioides	7-10	Asteraceae
	Liatris cylindracea	7-9	Asteraceae
	L. pycnostachya	7-10	Asteraceae
	L. squarrosa	6-9	Asteraceae
	Vernonia altissima	8-10	Asteraceae
	V. crinata	7-10	Asteraceae
	V. missurica	7-10	Asteraceae
	Lechea villosa	7-11	Cistaceae
72.	Echium vulgare	5-9	Boraginaceae
	Commelina communis	5-10	Commelinaceae
	Pontederia cordata	6-10	Pontederiaceae
	Kickxia elatine	5-10	Scrophulariaceae
	Linaria canadensis	4-9	Scrophulariaceae
73.	Tradescantia subaspera	6-9	Commelinaceae
75.	Heliotropium indicum	7-11	Boraginaceae
	Linum usitatissimum	5-9	Linaceae
76.	Vertrum woodii	7-9	Liliaceae
	Lythrum alatum	6-9	Lythraceae
	Heteranthera limosa	6-9	Pontederiaceae
	Pontederia cordata	5-11	Pontederiaceae
81.	Aster cordifolius	8-11	Asteraceae
	A. drummondii	8-10	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Echinacea purpurea	5-10	Asteraceae
	Elephantopus carolinianus	8-10	Asteraceae
	Erigeron annuus	5-11	Asteraceae
	Kuhnia eupatorioides	7-10	Asteraceae
	Lactuca floridana	8-10	Asteraceae
	Vernonia altissima	8-10	Asteraceae

	V. baldwinii	5-10	Asteraceae
	V. crinata	7-10	Asteraceae
	V. missurica	7-10	Asteraceae
82.	Lobelia inflata	6-10	Campanulaceae
	L. siphilitica	8-10	Campanulaceae
85.	Campanula americana	6-10	Campanulaceae
	Datura stramonium	5-10	Solanaceae
	Solanum americanum	5-11	Solanaceae
	S. carolinense	5-10	Solanaceae
91.	Carduus nutans	5-10	Asteraceae
	Cichorium intybus	5-10	Asteraceae
	Lactuca floridana	8-10	Asteraceae
	Petalostemon purpureum	5-9	Fabaceae
	Psoralea onobrychis	5-9	Fabaceae
	P. tenuiflora	5-9	Fabaceae
92.	Amphicarpa bracteata	8-9	Fabaceae
	Apios americana	6-9	Fabaceae
	Clitoria mariana	5-9	Fabaceae
	Desmodium spp	6-10	Fabaceae
	Lespedeza spp	5-10	Fabaceae
	Vicia spp	4-10	Fabaceae
95.	Ipomoea hederacea	7-10	Convolvulaceae

Green flowers

02.	Spiranthes lacera	8-10	Orchidaceae
11.	Plantago spp	4-11	Plantaginaceae
12.	Spiranthes lacera	8-10	Orchidaceae
21.	Plantago spp	4-11	Plantaginaceae
41.	Polygala verticillata	5-10	Polygalaceae
	Euphorbia supina	5-10	Euphorbiaceae
44.	Galium spp	4-9	Rubiaceae
45.	Asclepias verticillata	5-9	Asclepiadaceae
51.	Brickellia grandiflora	7-10	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Euphorbia dentata	7-10	Euphorbiaceae
	E. maculata	5-10	Euphorbiaceae
	E. supina	5-10	Euphorbiaceae
	Boehmeria cylindrica	6-10	Urticaceae
	Pilea pumila	7-10	Urticaceae
	Urtica dioica	5-10	Urticaceae
52.	Scrophularia marilandica	7-10	Scrophulariaceae
61.	Ambrosia artemisiifolia	7-11	Asteraceae

SEPTEMBER TO NOVEMBER-Green to Brown

	Euphorbia heterophylla	7-10	Euphorbiaceae
62.	Conobea multifida	5-10	Scrophulariaceae
71.	Amaranthus spp	6-10	Amaranthaceae
	Artemisia spp	6-11	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Croton spp	5-10	Euphorbiaceae
	Crotonopsis spp	6-9	Euphorbiaceae
	Euphorbia heterophylla	7-10	Euphorbiaceae
	Rumex spp	4-9	Polygonaceae
	Parietaria pensylvanica	5-10	Urticaceae
81.	Artemisia spp	6-11	Asteraceae
	Brickellia grandiflora	7-10	Asteraceae
	Cacalia atriplicifolia	6-10	Asteraceae
	C. muhlenbergii	5-9	Asteraceae
	Iva ciliata	7-10	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	Xanthium spp	8-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Acalypha spp	6-10	Euphorbiaceae
	Euphorbia heterophylla	7-10	Euphorbiaceae
	Rumex spp	4-9	Polygonaceae
85.	Penthorum sedoides	7-10	Saxifragaceae
91.	Ambrosia artemisiifolia	7-11	Asteraceae
	A. trifida	7-9	Asteraceae
	Artemisia spp	6-11	Asteraceae
	Prenanthes altissima	7-10	Asteraceae
	Chenopodium spp	5-11	Chenopodiaceae
	Euphorbia heterophylla	7-10	Euphorbiaceae
	Rumex spp	4-9	Polygonaceae
95.	Aralia racemosa	6-8	Araliaceae
97.	Passiflora lutea	6-9	Passifloraceae

Brown flowers

55.	Schrophularia marilandica	7-10	Scrophulariaceae
81.	Acalypha spp	6-10	Euphorbiaceae
92.	Apios americana	6-9	Fabaceae

ACANTHACEAE Acanthus Family

Herbaceous in our area.

Leaves opposite, simple, entire.

Flowers complete, 5-merous; corolla often tubular and 2-lipped, the calyx regular; ovary superior, with thread-like style; stamens 2 or 4.

W 5-10

JUSTICIA AMERICANA Water Willow

Gravelly or muddy, wet areas, often in large colonies.

To 1 m. tall.

Leaves opposite, simple, entire; willow-like, sessile.

Inflorescence: crowded spike on long, axillary peduncle.

Flowers 1-3 cm. long, the 3-parted calyx almost regular; the corolla 2-lipped, with purple spots; 2 stamens; showy.

RUELLIA Wild Petunia

Corolla almost regular; stamens 4.

Common name from presumed resemblance to the botanically unrelated petunia.

1 Stems glabrous, or with narrow, hairy strips on 2 sides; leaves dark green, remotely or sparsely hairy . . . **R. strepens**

1' Stems equally hairy on all sides; leaves olive or grass green, more or less densely hairy

2 Leaves sessile, or with petioles to 3 mm. long; flowers sessile (or nearly so), in axillary clusters . . . **R. humilis**

2' Leaf petioles to 15 mm. long; flowers on axillary peduncles . . . **R. pedunculata**

B 5-10

RUELLIA HUMILIS Low Ruellia

Dry, usually open areas.

Stem hairy on all sides; to 6 dm. tall.

Leaves densely hairy; olive green, sessile or short petioled.

Flowers in axillary clusters, sessile, or nearly so; calyx lobes less than 1 mm. wide.

B 5-9

RUELLIA PEDUNCULATA Peduncled Ruellia

Dry, rocky, usually open areas.

Stem hairy on all sides, the short hairs miniscule and recurved; usually branching above; to 7 dm. tall.

Leaves densely hairy, olive green, petioled.

1 to several flowers subtended by a pair of leafy bracts at summit of peduncles arising in leaf axils; calyx lobes often thread-like.

Species endemic to Ozark region and neighboring areas.

RUELLIA STREPENS Smooth Ruellia

B 5-10

Usually in low, wet areas.

Stem glabrous, or with hairs on 2 sides (in thin lines); to 10 dm. tall.

Leaves sparsely hairy, dark green, thin, petioled.

1-several flowers, subtended by leafy bracts, on short axillary peduncles; calyx lobes 2-4 mm. wide.

Specific epithet Lat., "rustling" refers to sound of seeds in dry, explosive fruit.

AIZOACEAE Carpet-weed Family

Herbaceous plants, in our area.

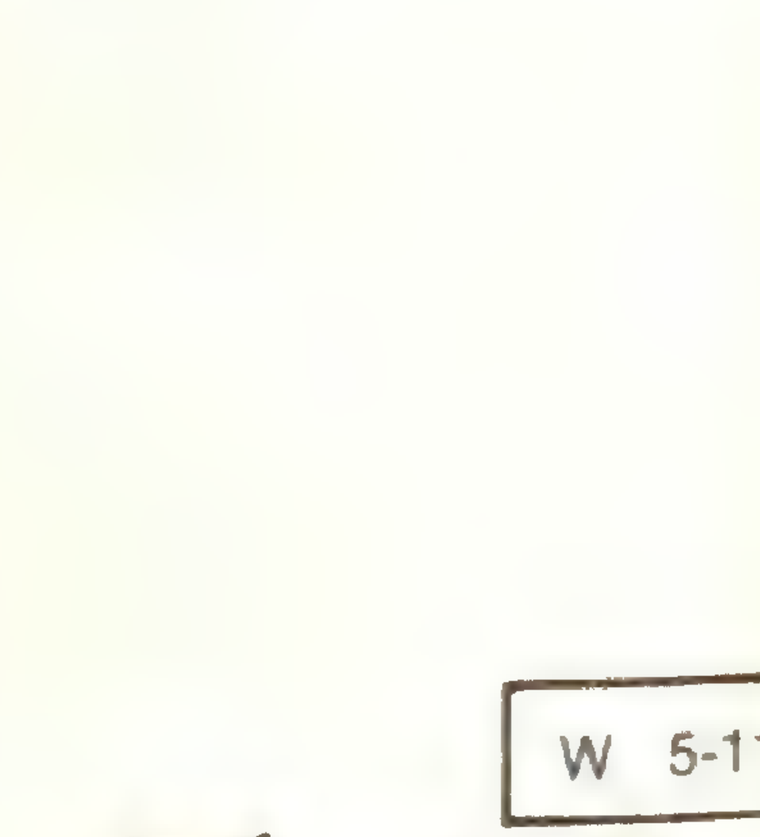
Stems and leaves often succulent.

Leaves simple.

Flowers regular, with calyx, but no corolla.

MOLLUGO VERTICILLATA Carpet-weed

W 5-11



Moist waste or cultivated areas; weedy plant, difficult to eradicate from lawns.

Stems prostrate or ascending, repeatedly forked; forms mats to 4 dm. wide.

Leaves in whorls of 3 to 8 at nodes; to 3 cm. long tapering to a short petiolar base.

Flowers at nodes, 2-5 per node; single-flowered pedicels 5-15 mm. long; corolla absent; 5 distinct sepals, white inside; 3-4 stamens and 2-5 styles.

Specific epithet refers to whorled arrangement of leaves.

ALISMATACEAE Water-plantain Family

Steyermark refers to this family as Alismaceae.

Herbaceous monocots of wet soils, usually growing on the muddy shores of quiet waters.

Leaves basal, simple, entire, long petioled.

Flowers usually complete; 3-merous, 3 rounded petals, 3 green sepals; regular; 10 or more simple pistils; stamens 6 or more.

1 Pistils in single series; 6 stamens . . . **Alisma**
1′ Pistils in several series; 6-20 stamens
  2 All flowers perfect . . . **Echinodorus**
  2′ At least some flowers imperfect . . . **Sagittaria**

ALISMA PLANTAGO-AQUATICA Water Plantain

W 5-9

Typical familial habitats.

Flowering stem to 1 m. tall.

Leaves basal, simple, entire, rounded to subcordate at base; long-petioled.

Flowers small, stalked, in whorls at tips of branches of flowering stem; 3 rounded petals, 3 green sepals; perfect; 10-25 pistils in single whorl on flat receptacle; stamens 6.

Specific epithet and common name both refer to habitat and plantain-like leaves.

ECHINODORUS CORDIFOLIUS Bur-head

W 6-9

Chiefly found along wet, muddy shores of oxbow lakes.

Prostrate or creeping plants, the flowering stem to 12 dm. long; often rooting and producing leaves at nodes

Leaves basal, simple, entire, cordate at base; conspicuously raised cross-veining on lower surface; long-petioled.

Flowers rather showy, in whorls at nodes of flowering stem; 3 rounded petals, 3 green sepals; perfect; pistils in several series, on globe-shaped receptacle; stamens 15-20.

Generic and common names refer to prickly head of fruit, formed of burlike ripened pistils with persistent styles; specific epithet refers to often heart-shaped base of leaves.

ALISMATACEAE

SAGITTARIA Arrowhead

Typical familial habitats-

Leaves of species in our area all basal, arrowhead-shaped and long petioled.

Inflorescence raceme-like, with showy flowers in whorls of 3; 3 rounded petals, 3 green sepals; flowers often imperfect, the pistillate with pistils in several series on convex receptacle, the staminate with 7 to many stamens.

Generic and common names refer to arrowhead shape of leaves of most species.

1 Sepals large and conspicuous; lower flowers perfect . . . **S. montevidensis**
1' Sepals neither large nor conspicuous; spreading or reflexed in fruit
  2 Main flowering stem striate or angled at base; 3 papery bracts at base of whorl of pistillate flowers long-pointed (1.5-4 cm.) . . . **S. engelmanniana**
  2' Main flowering stem round at base; 3 papery bracts at base of whorl of pistillate flowers either blunt or with point less than 1 cm. long . . . **S. latifolia**

SAGITTARIA ENGELMANNIANA

W 6-9

Typical familial habitats.

Slender plant; flowering stem striate or angled at base, to 8 dm. tall.

Leaves basal, petioled, arrowhead shaped, with narrow lobes (to 10 cm. wide).

Flowers in whorls of 3-10, the upper staminate or perfect, the lower usually pistillate, basal bracts long-pointed.

SAGITTARIA LATIFOLIA Duck Potato

W 6-9

Typical familial habitats.

Flowering stem sometimes branched, round at base, to 12 dm. tall.

Leaves basal, petioled, arrowhead-shaped, with lobes to 25 cm. wide.

Flowers in whorls of 2-15, the upper staminate or perfect, short-pedicelled; the lower usually pistillate, with longer pedicels; the bracts at base of these blunt, or very short-pointed.

Specific epithet describes leaves as wide; common name refers to large, starchy tubers, apparently eaten raw by ducks, but edible also for man, when cooked.

SAGITTARIA MONTEVIDENSIS

W 6-9

Typical familial habitats.

Flowering stem stout, to 15 cm. tall.

Leaves basal, petioled, arrowhead-shaped.

Flowers in whorls of 2-10, the upper staminate or perfect, on long threadlike pedicels, the lower usually pistillate, on stout, shorter pedicels; the bracts at base of these united below.

AMARANTHACEAE Amaranth Family

Herbaceous, often weedy plants.

Leaves simple, mostly entire without stipules, often hairy.

Inflorescence of tiny flowers, each subtended by bracts, often grouped into large spikes, etc.

Flowers without corolla, calyx usually 5-merous, sepals usually thin, dry and not green; often imperfect; hypogynous; stamens 5 or less.

1 Leaves alternate . . . **Amaranthus**

1′ Leaves opposite

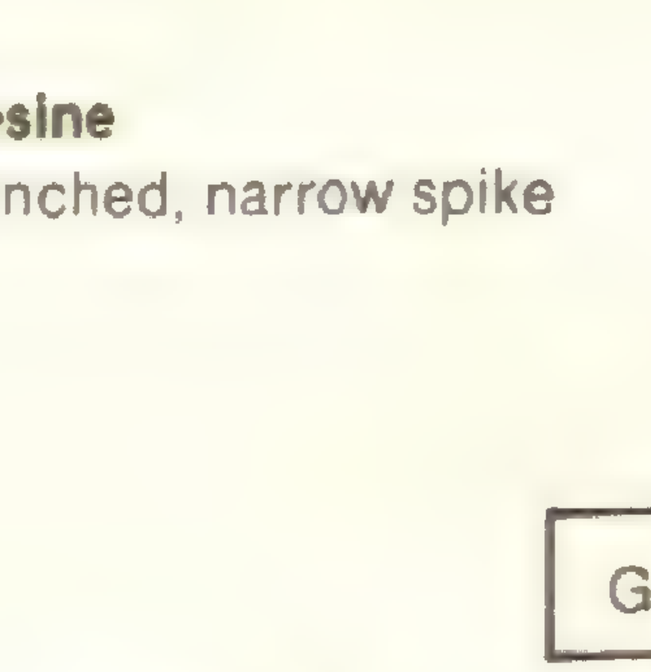
2 Leaves petioled; inflorescence branching . . . **Iresine**

2′ Leaves sessile or nearly so; inflorescence unbranched, narrow spike . . . **Froelichia**

AMARANTHUS

G 6-10

Several weedy species common in our area; Steyermark lists 5 native, 7 introduced species in Missouri.



Stem usually much branched.

Leaves alternate, entire, petioled.

Inflorescence terminal or axillary.

Tiny flowers imperfect.

Generic name Gr., "unfading," as dry calyx and bracts do not wither.

FROELICHIA GRACILIS **Cottonweed**

W 5-9

Sandy, gravelly ground, often bordering streams.

Slender plants, often branching widely from base, to 4.5 dm. tall.

Leaves opposite, narrow, densely woolly below, sessile or nearly so.

Tiny flowers in long, narrow, woolly, terminal spike.

IRESINE RHIZOMATOSA **Bloodleaf**

W 8-10

Low, wet, shaded areas.

Stem usually unbranched below inflorescence; to 1.5 dm. tall.

Leaves opposite, entire, thin, bright green, glabrous or slightly hairy on lower surface, petioled.

Branching pyramidal inflorescence from axils of upper leaves; bracts and calyx silver-white; those of pistillate flowers subtended by hairs as much as 5 mm. long.

AMARYLLIDACEAE Amaryllis Family

Herbaceous monocots, so similar to the Lily family that some authors combine the families.

Leaves basal, simple, entire; long, relatively narrow, parallel-veined.

Inflorescence terminal on often leafless, flowering stem.

Flowers with 6-merous perianth, the parts alike or nearly so; regular or nearly so; perfect, epigynous; stamens 6.

AGAVE VIRGINICA Rattlesnake Master

G-Y 6-8

Open, rocky areas; usually, but not always, in limestone soils.

Flowering stem with very reduced leaves, to 2 m. tall.

Leaves mostly in basal rosette; often slightly toothed; long and narrow, with pointed tips; often purple-blotched; glabrous.

Inflorescence fleshy, long, narrow spike, with flowers scattered.

Flowers not showy, but fragrant at night.

Generic name Gr., "noble," in no sense applicable to this species, but appropriate for **A. americana**, the "century plant"; specific epithet refers to powers we have not found authenticated.

HYPOXIS HIRSUTA Yellow Star Grass

Y 4-5

Dry open areas, in acid soil.

Flowering stem hairy, to 3.5 dm. tall.

Leaves grasslike, often hairy.

Inflorescence: 2-7-flowered umbel.

Tepals often greenish and short-hairy on underside.

Sometimes second blooming in fall.

ANACARDIACEAE Cashew Family

RHUS Sumac

Woody plants with resinous or milky sap.

Leaves alternate, pinnately compound.

Flowers small, regular; stamens 5.

ANACARDIACEAE

1 Leaves trifoliolate
  2 Terminal leaflet not stalked; plant aromatic; flowers in crowded clusters appearing before or with leaves . . . **R. aromatica**
  2' Terminal leaflet stalked; plant not aromatic (BUT poisonous); flowers in loose clusters, after leaves mature . . . **R. radicans**

1' Leaves pinnate with more than 3 leaflets
  3 Branches and petioles glabrous; leaflets toothed; main leaf axis not winged . . . **R. glabra**
  3' Branches and petioles hairy; leaflets entire; main leaf axis winged . . . **R. copallina**

RHUS AROMATICA Fragrant Sumac

Y 3-4

Thin, rocky soil.

Shrub, up to 2 m. tall.

Leaves trifoliolate, the terminal leaflet not stalked; "furry" when young.

Flowers appear before leaves; pale yellow, sessile on short, spikelike branches of small panicle.

Specific epithet refers to the aromatic property of leaves when bruised.

RHUS COPALLINA Dwarf Sumac

W 5-11

Prairies, thickets, mostly in acid soils

Shrub, 1.5-2.5 m. tall.

5 or more leaflets, opposite, firm, entire or almost so; rachis winged; in autumn, a brilliant flame color.

Inflorescence terminal, erect, pyramidal.

RHUS GLABRA Smooth Sumac

Y-G 5-7

Prairies, thickets, roadsides; forms dense thickets.

Glabrous, glaucous-twigged shrub, 1.5-7 m. tall.

5 or more opposite leaflets, thin, pale on under surface, sharply serrate; in autumn bright red on upper surface, silver on lower.

Inflorescence terminal, erect, pyramidal.

RHUS RADICANS Poison Ivy

G 5-6

Disturbed areas of all sorts and woods.

Slender shrub or climbing vine, with aerial, clinging roots.

Leaves trifoliolate, the terminal leaflet stalked.

Axillary panicles of yellowish green flowers.

Specific epithet Lat., "climbing"; common name refers to its effect: even bare winter stems or roots or smoke from burning plant can be dangerous to allergic people.

ANNONACEAE Custard Apple Family

ASIMINA TRILOBA Pawpaw

R-B 3-5

Low, rich soils, often growing in thickets, due to "suckering" habit.

Smallish tree, up to 10 m. tall.

Leaves broadest above the middle, tapering at base; alternate, pointed, entire, thin, paler on lower surface; about 15-30 cm. long; ill-smelling when bruised.

Flowers produced with leaves, on small branches of previous year; perianth 3-merous; many stamens and several pistils.

Family name from taste of fruits.

APIACEAE Parsley Family

Herbaceous plants, their stems often hollow.

Leaves usually compound, basal and/or alternate, the petioles either dilated or sheathing at the base.

Inflorescence simple or compound umbels, usually subtended by involucral bracts.

Flowers very small, epigynous, 5-merous, with 2 styles.

Family name, **Apiaceae**, refers to typical genus, that of celery (**Apium**); older name, **Umbelliferae**, was more descriptive as inflorescence is characteristic of all family members.

1 Leaves simple . . . **Egyngium**
1' Leaves compound
  2 White flowered plants
    3 Ovaries and/or fruit hairy or bristly
      4 Leaves once compound
        5 Palmately compound, with 3-7 broad leaflets . . . **Sanicula canadensis**
        5' Pinnately compound . . . **Torilis**
      4' Leaves more than once compound
        6 Leaflets serrate, uniform in shape, at least 1 cm. wide . . . **Osmorhiza**
        6' Leaflets not uniform; less than 1 cm. wide
          7 Involucre of conspicuous bracts; principal umbels with 20 or more umbellets . . . **Daucus**
          7' Involucre absent or inconspicuous
            8 Principal umbels with 15 or less umbellets; leaves on stem . . . **Chaerophyllum**
            8' Principal umbels with 2-4 umbellets; most leaves basal . . . **Erigenia**
    3' Ovaries and/or fruit smooth
      9 Leaves once compound . . . **Cryptotaenia**
      9' Leaves 2 or 3 times divided
        10 Involucre of narrow bracts, leaflets deeply pinnatifid . . . **Conium**
        10' Involucre usually absent; leaflets serrate to nearly entire . . . **Cicuta**
  2' Yellow flowered plants
    11 Ovaries and/or fruits bristly or hairy; leaves once palmately compound . . . **Sanicula gregaria**
    11' Ovaries and/or fruit smooth
      12 Leaves once compound
        13 3 leaflets pinnately veined
          14 Central flower of each umbellet sessile . . . **Zizia**
          14' Central flower of each umbellet stalked . . . **Thaspium**
        13' Leaves with 5 or more leaflets . . . **Pastinaca**
      12' Leaves 2-3 times divided
        15 Leaflets entire . . . **Taenidia**
        15' Leaflets so divided as to be indistinguishable . . . **Polytaenia**

CHAEROPHYLLUM PROCUMBENS

W 3-6

An insignificant plant of low, open areas; glabrous; to 5.5 dm. tall

Leaves so deeply cut as to appear fern-like.

Flowers white.

Generic name Gr., "rejoice", due to pleasant odor of leaves; specific epithet means lying flat, which this plant may do without much urging, since it is very weak stemmed.

CICUTA MACULATA Water Hemlock or Spotted Cowbane

W 5-9

Borders of ponds or wet depressions in open areas.

Stem smooth, stout and spotted with purple.

Leaves 2-3 times compound, sometimes 3 dm. long; usually coarsely toothed, often red-tinged; alternate; sheathing.

Involucre usually absent; white flowers produced in loose umbels; triangular sepals well developed.

Specific epithet Lat., "spotted"; second common name refers also to fact that plant is bane or poisonous to cows as it is to any animal that eats it.

CONIUM MACULATUM* Poison Hemlock

W 5-8

Weedy plant of waste areas and roadsides.

Stem erect, smooth, spotted with purple; much branched: 0.8-1.5 m. tall.

Leaves 3-4 times finely divided; rank odor when crushed.

Involucre of narrow bracts; flowers white with well-developed, triangular sepals; ovary and fruit smooth.

Specific epithet Lat., "spotted"; first part of common name well-deserved: this plant famed as cause of Socrates' death. "hemlock" is unexplained.

APIACEAE

CRYPTOTAENIA CANADENSIS Wild Chervil or Honewort

W 5-8

Usually found in low, moist areas, often in the woods.

Smooth stem; 3-9 dm. tall.

Leaves trifoliolate; the lower long-petioled, the upper shorter, and dilated at base.

Umbels with few, white flowers; involucre and sepals either absent or much reduced; ovaries smooth.

DAUCUS CAROTA* Queen Ann's Lace or Wild Carrot

W 5-10

Weedy plants of roadsides, or dry waste ground.

Erect, hairy, 3-9 dm tall.

Leaves several times compound, with narrow segments pinnately arranged.

Featherlike involucre subtends main umbel; one dark flower usually in center, surrounded by white flowers; ovary and fruit prickly.

ERIGENIA BULBOSA Harbinger of Spring

W 2-4

Tiny woodland plant, usually hidden by dead leaves in very early spring: often found at bases of slopes. 5-15 cm. when flowers open, taller at maturity; smooth.

Leaves more than once compound, the divisions less than 1 cm wide: long petioled with dilated sheathing basal leaves.

Small compound umbels subtended by leaf-like short-petioled bracts.

White flowers, without sepals; tiny.

Common name is a rough translation of generic name. Also called "pepper-and-salt" due to white petals and dark red anthers.

W 7-8

ERYNGIUM YUCCIFOLIUM Rattlesnake Master or Button Snakeweed

Prairies, glades; rocky, open woodlands.

Stiffly erect, coarse stem to 1 m. or more tall.

Leaves strap-shaped, parallel veined, hard, more or less spiny on the margins.

Inflorescence rounded head of whitish flowers.

Specific epithet refers to similarity of leaves and growth form to **Yucca** (which see); common names to early use in treating snakebite; button to tight, almost globose inflorescence.

W 4-6

OSMORHIZA CLAYTONII Woolly Sweet Cicely

Rich woods, on slopes or in valleys or thickets; prefers moist areas.

Plant is soft-hairy in all parts; to 2 m. tall.

Leaves twice ternately compound, the lower petioled, the upper nearly sessile.

Inflorescence usually taller than leaves.

No sepals; *styles distinctly shorter than petals;* white flowers have bristly ovaries.

Generic name Gr., "scented root".

W 4-6

OSMORHIZA LONGISTYLIS Anise Root

Specific epithet points the difference between this and previous species; in this plant *styles are distinctly longer than petals.* Otherwise the plants are very similar in morphology and habitat.

This species, however, can be used as a seasoning due to its anise-like odor. (Note though that the true anise comes from a different member of the same family — **Pimpenella**.) This accounts for both generic (see above) and common names.

APIACEAE

PASTINACA SATIVA* Parsnip

Y 4-10

Fields, waste areas.

Stout glabrous stem; grooved; to 1.5 m. tall.

Large leaves pinnately divided into broad lobed and toothed sessile leaflets; petioles sheathing.

Umbels of yellow flowers 17-22 mm. broad.

Generic and specific names both refer to the fact that the root is edible.

POLYTAENIA NUTTALLII Prairie Parsley

Y 4-6

Prairies; rocky, open glades.

Stout, erect plant 0.5-1 m. tall; mostly glabrous.

Leaves much dissected, the leaflets less than 1 cm. wide.

Petals yellow.

SANICULA CANADENSIS Black Snakeroot

W 5-7

Rich cr rocky open woods and thickets.

Glabrous herbaceous plant up to 7.5 dm. tall.

Leaves palmately divided into 3-5 leaflets; basal leaves long-petioled, upper sessile or almost so.

Flowers white, staminate and perfect flowers in same head; not showy; ovaries bristly.

Generic name Lat., "to heal".

SANICULA GREGARIA Black Snakeroot or Sanicle

G-Y 3-7

Open woods and thickets.

Plant to 7.5 dm. tall.

Leaves 3-5, palmately divided, segments sharply and finely serrate to incised; basal leaves petioled, upper stem leaves progressively reduced and nearly sessile.

Inflorescence leafy, umbel irregular.

Calyx lobes much shorter than *greenish-yellow petals;* anthers bright yellow.

Generic name, see above.

TAENIDIA INTEGERRIMA Yellow Pimpernel

Y 5-7

Rocky, dry, open spaces.

Slender plant, glabrous and glaucous; 5-10 dm. tall.

Lower leaves twice trifoliolate, with untoothed leaflets.

Yellow flower cluster showy; umbels loose; no involucre; inner flowers male and short pedicelled; outer fertile and long pedicelled.

Specific epithet Lat., "untoothed" refers to entire leaflets.

THASPIUM BARBINODE Hairy-Jointed Meadow Parsnip

Y 4-6

Rich, rocky, open woods.

Stem up to 1 m. tall, with beard of short hairs at upper nodes.

All leaves at least once ternate, *margins of leaflets green, and fringed with short hairs;* lower leaves long petioled.

No involucre below inflorescence; *flowers pale yellow,* in compound umbels, central flower of each umbellet stalked.

Specific epithet and common name both refer to beard at nodes.

APIACEAE

THASPIUM TRIFOLIATUM Meadow Parsnip

Y 4-6

Prairies, ledges of bluffs and thickets.

Glabrous stem up to 8 dm. tall.

Basal leaves simple or only once ternate; *margins of leaflets white.*

No involucre below inflorescence; *flowers bright yellow,* in compound umbels; central flower of each umbellet stalked (THIS IS SIMPLEST CHARACTER by means of which to differentiate this species from **Zizia aptera.** See below.)

TORILIS JAPONICA* Hedge Parsley or Hemlock Chervil

W 6-8

Open, waste areas or thickets.

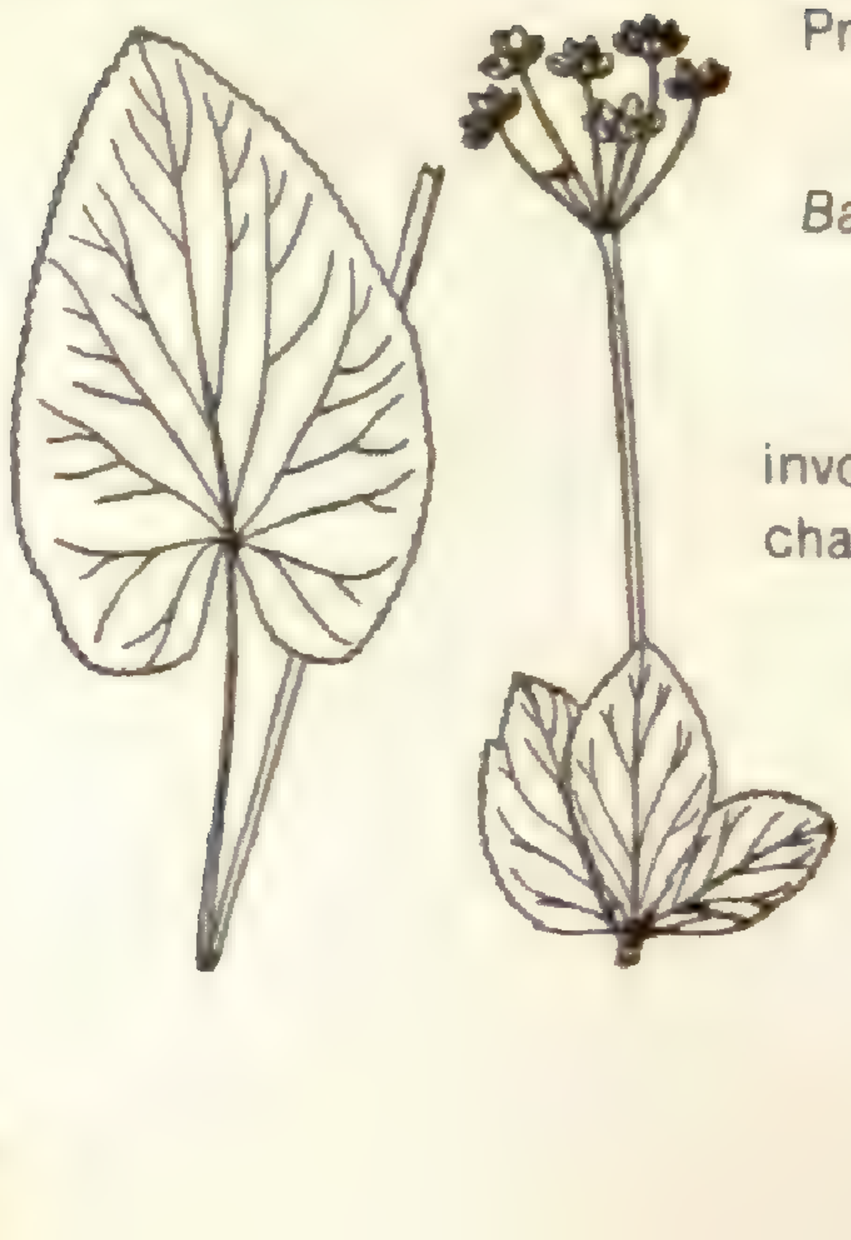
Hairy, much-branched stem, up to 8 dm. tall.

Leaves once or twice compound, the leaflets serrate.

White flowers in long peduncled umbel, forming loose, open inflorescence; pedicels short and densely strigose.

ZIZIA APTERA

Y 4-6



Prairies, glades, rich or rocky woods, slopes of bluffs, thickets.

Basal leaves all simple and broadly ovate; stem leaves trifoliolate; all long-petioled.

Bright yellow flowers in compound umbel, without involucre; central flower of umbellet NOT stalked. (This character is best to use in differentiating this **Zizia** from the very similar **Thaspium trifoliatum**.)

Specific epithet refers to fruit as without wings. In the similar genus **Thaspium**, fruits are winged.

ZIZIA AUREA Golden Alexander

Y 4-6

Prairies, glades, etc., as above, but found more often in moist habitats.

Basal leaves almost all divided; stem leaves with 3-11 sharply pointed leaflets; finely serrate.

Bright yellow flowers in compound umbel, without involucre; central flower of umbellet *not* stalked.

APOCYNACEAE Dogbane Family

Most plants with milky sap.

Leaves exstipulate, simple, entire, *usually* opposite.

Flowers regular, perfect, 5-merous; anthers bend over single stigma.

1 Leaves alternate ... **Amsonia**

1' Leaves opposite

2 Stems erect ... **Apocynum**

2' Stems trailing... **Vinca**

AMSONIA ILLUSTRIS Blue Star

B 4-5

Sand bars and/or gravelly shores (endemic to a very limited area).

Leaves alternate, firm, upper surface *shiny*, 2.5 broad, entire and somewhat leathery.

Flowers regular, perfect, 5-merous, with *hairy calyx.*

Common name refers to the shape and color of flowers.

APOCYNACEAE

B 4-5

AMSONIA TABERNAEMONTANA

Rich or rocky woods, slopes, ravines.

Several stems from base, to 1 m. tall.

Leaves sparse, thin, to 6 cm. wide, alternate, entire, petioled, *dull.*

Inflorescence terminal (though sometimes overtopped by branches); crowded.

Flowers regular, perfect, 5-merous, with *glabrous calyx* and lobes of corolla hairy outside.

APOCYNUM Species often difficult to identify as both those listed herein hybridize readily with others.

P 5-7

APOCYNUM ANDROSAEMIFOLIUM Spreading Dogbane or Pink Dogbane

Dry, mostly open areas.

Stem never standing erect from bottom to top, inflorescences usually overtop leafy branches.

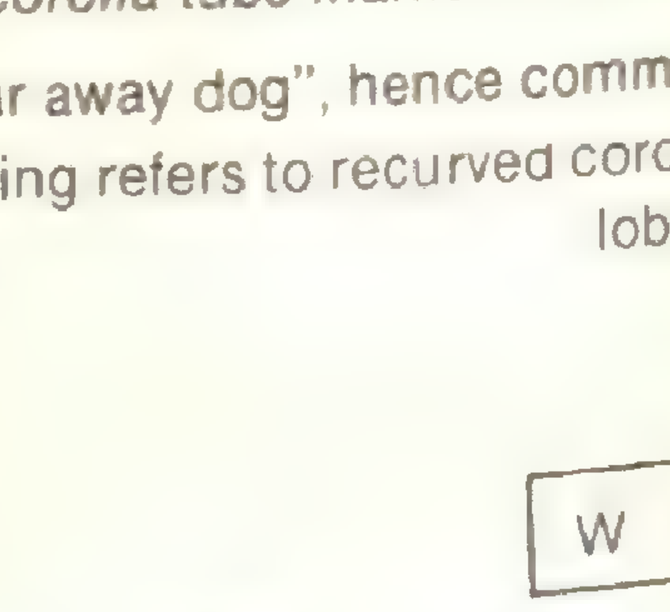
Leaves opposite, usually drooping.

White flowers with *spreading or recurved corolla lobes,* twice as long as calyx tube; *fragrant and nodding; inside of corolla tube marked with red.*

Generic name means "far away dog", hence common name "dogbane"; spreading refers to recurved corolla lobes.

W 5-8

APOCYNUM CANNABINUM Indian Hemp or Dogbane



Open ground, prairies, glades, thickets, woodland borders.

Stems usually branched and erect, to 1.5 m. tall, branches often reddish, *lateral branches usually overtop inflorescence.*

Leaves of primary stem generally narrowed at base to distinct petioles 2-7 mm. long; those of branches often without petioles.

Terminal cymes of ascending flowers; the central cyme flowering first.

APOCYNUM CANNABINUM Indian Hemp or Dogbane (con't.)

Flowers 2-4 mm. long, erect; *corolla lobes greenish-white, erect or slightly spreading; no red lines inside corolla tube.*

Specific epithet means "hemplike"; first common name refers to this; for second, see above.

VINCA MINOR* Common Periwinkle or Myrtle

B 4-5

Evergreen, trailing vine; a garden escape that can take over whole areas if not cut back.

Leaves opposite, dark green, shiny.

Slender tubed, peduncled blue flowers are about 2.5 cm. across.

Generic name Lat., "to bind", referring to early use of long, flexible shoots in making wreaths; first common name a misspelling of part of Pliny's names for plant, Vinca pervinca; second common name is a misnomer.

AQUIFOLIACEAE Holly Family

Woody plants; usually dioecious.

Leaves alternate, simple.

Flowers small, unisexual, regular.

ILEX DECIDUA Deciduous Holly or Possum Haw

W 4-5

Limestone glades, lowland wet areas or open upland woods.

Shrub or small tree, with light gray bark.

Leaves deciduous, alternate or sometimes clustered on short branches; bluntly toothed above, broadest in the middle, light green on both sides (but paler below); petioled.

Flowers whitish and clustered, the peduncles of staminate florets longer than leaf petioles, the pistillate shorter.

Second common name from resemblance of fruit to that of the hawthorn, and presumably delectable to possums.

ARACEAE

ARACEAE Arum Family

Monocots, but leaves are often not typical of this class (often net-veined); herbaceous

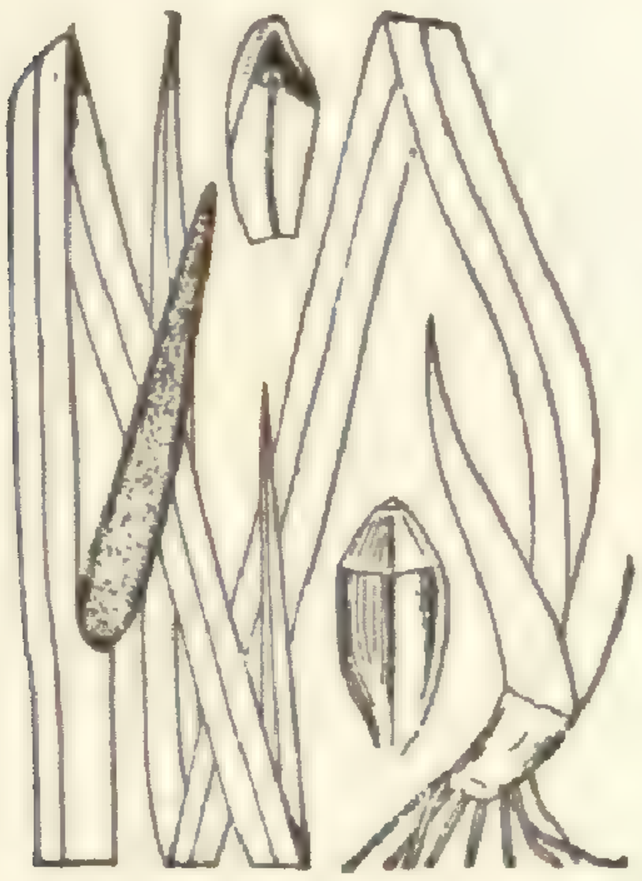
Leaves petioled, large, smooth, shiny; often compound in our area.

Flowers tiny and crowded on a characteristic inflorescence, the spadix, on which staminate flowers are often found above the pistillate; characteristically, also, the spadix is subtended and sometimes enclosed by a leaflike spathe; flowers often ill-smelling, in order to attract carrion-eating insects as pollinators.

Common name Arabic, "fire", refers to sensation caused by tasting roots.

ACORUS CALAMUS Sweet Flag

Y-G 5-7



Wet meadows, sloughs and ponds, often in large colonies.

Leaves typically monocotyledonous.

Yellowish-green, tiny flowers produced on long, narrow spadix that emerges from folded stem, about 1/2 way up its length, and at an angle; in this plant, the top of the folded stem is leafy, and takes the place of the commoner type of spathe.

Common name "sweet" from fragrance of crushed leaves; "flag" from resemblance of leaves of those of **Iris**, called by this common name.

ARISAEMA ATRORUBENS Jack in the Pulpit

G 4-6

Rich, shaded woods, usually in moist areas.

1-2 trifoliolate (or more divided) leaves, long petioled, to 6 dm. (or sometimes taller).

Spadix produces male flowers at top, female below; *surrounded beneath by encircling spathe, which arches over it;* the spathe green or sometimes purplish brown, and often striped.

Common name for presumed similarity of relation between spadix and spathe to a preaching minister; the specific epithet means deep red and refers to mature fruits.

ARISAEMA DRACONTIUM Green Dragon

G 4-6

Wet, shady areas.

Usually only 1 long-petioled compound leaf with 7-13 leaflets palmately arranged (but often irregularly so); to 5 dm. as flowers open, but taller at maturity; long petioled.

Spadix with male flowers above, female below; *very long pointed, and thus exserted from spathe.*

ARALIACEAE Ginseng Family

Leaves usually alternate, large and palmately compound, with sheathing bases.

ARALIA RACEMOSA Spikenard

W-G 6-8

Moist, wooded areas, often on north-facing slopes.

Herbaceous, but grows so tall (to 3 m.) as to appear shrubby; stem smooth, blackish, *much branched.*

Leaves twice compound, each with 9-21, often heart-shaped, leaflets.

Peduncle, from main stem, bears *numerous umbels* in long, terminal clusters.

Common name probably refers to a fragrant salve, mentioned in the Bible, connecting it with a similar plant, as root is aromatic.

PANAX QUINQUEFOLIUS Ginseng

G-W 6-7

Rich wooded, usually north-facing slopes; usually in limestone areas.

Unbranched stem, to 4 dm. bears 3 (sometimes 4) palmately compound leaves, each long petioled, from its tip.

Inflorescence a *single,* terminal umbel.

The generic name means all-healing; (especially in the Orient this plant has such a reputation); specific epithet refers to 5 leaflets of the compound leaf.

ARISTOLOCHIACEAE

ARISTOLOCHIACEAE Birthwort Family

Herbs or twining vines.

Leaves alternate, usually petioled, entire.

Flowers attract carrion insects with their color and (often) odor; 3 calyx lobes above inferior ovary; 6-12 stamens nearly joined to fleshy style; stigma lobed.

Common name comes from Greek for "best birth", based on the assumption that plants of this family, in which the flower shape is similar to that of a fetus, are designed to help in the delivery of babies.

1 Leaves alternate. . . **Aristolochia**

1' Leaves all basal. . . **Asarum**

ARISTOLOCHIA SERPENTARIA Virginia Snakeroot

Br 5-7

Woods, usually dry or well drained.

Erect herb, slender, wavy stem, sparingly branched at base; 4.5 dm. tall.

Few leaves, cordate, with long, pointed tips.

Flowers practically buried in the ground; arise from slender, crooked stems near their base; calyx tube very curved.

Common name from plants reputed value in treating snakebites.

ARISTOLOCHIA TOMENTOSA Dutchman's Pipe

Br 5-6

Low woods, along streams; rarely in open areas.

Long-stemmed, *showy vine*, either trailing or climbing.

Leaves cordate at base; large; lower surface soft-hairy.

Flower odd shape, with 3 short calyx lobes and 6 stamens, their sessile anthers adnate to stigma.

Common name refers to pipelike shape of flower.

ASARUM CANADENSE Wild Ginger

R-Br 4-5

Rich, moist, wooded slopes.

A low-growing, stemless plant.

Leaves soft-hairy, cordate, *petioled*; usually 2, basal.

Flowers single, nodding, short peduncled; very close to ground; 3-merous.

Common name refers to spicy, aromatic rootstock.

ASCLEPIADACEAE Milkweed Family

Erect herbs or twining vines in our area; usually with milky sap.

Leaves usually opposite, simple, entire.

Flowers of complex structure; regular, perfect, 5-merous, and with superior ovaries, but anthers adhere to stigma forming organ called the gynostegium; and pollen grains adhere to each other in waxy masses called pollinia, which are joined bogether like saddle bags.

1 Stems erect. . . **Asclepias**

1' Stems twining

2 Glabrous plant with greenish-white flowers . . . **Cynanchum**

2' Hairy plant with maroon flowers. . . **Matelea**

Family name from that of Greek god of medicine, indicating that some genera have been of medicinal value in some cultures; common name refers to milky sap found in most family members.

ASCLEPIAS Milkweed

Erect, herbaceous plants, usually with unbranched stems.

Inflorescence: peduncled terminal and/or axillary umbels.

Flowers with 5-parted corolla, often bent down over the always reflexed calyx.

1 Corolla greenish or whitish

2 Leaves opposite. . . **A. viridiflora**

2' Some or all leaves alternate or whorled

3 Leaves whorled and narrow (to 5.5 mm. wide). . . **A. verticillata**

3' Leaves alternate

4 Plant smooth, leaves over 2 cm. wide (to 13 cm.); inflorescence usually terminal with showy flowers. . . **A. viridis**

ASCLEPIAS Milkweed (con't.)

4' Plant rough to the touch; leaves under 2 cm. wide; inflorescnece terminal and/or axillary . . . **A. hirtella**

1' Corolla neither whitish nor greenish

5 Corolla orange . . . **A. tuberosa**

5' Corolla pink to purple

6 Some leaves not opposite

7 At least some leaves whorled . . . **A. quadrifolia**

7' Leaves alternate . . . **A. viridis**

6' Leaves opposite or in whorls

8 Plants of wet areas

9 Corolla pink to red, rarely white . . . **A. incarnata**

9' Corolla dull purple, . . . **A. sullivantii**

8' Plants of dry areas

10 Corolla dull purplish or pinkish; plant coarse, the stout stem to 2 m. tall. umbels terminal and axillary; flowers fragrant . . . **A. syriaca**

10' Corolla purplish red; slender plant to 1 m. tall, umbels 1-few; leaves downy below, pointed . . . **A. purpurascens**

ASCLEPIAS HIRTELLA Tall Green Milkweed

G-W 5-8

Prairies, glades, but rare in our area

Leaves crowded, short, hairy, rough, under 2 cm wide

Flowers greenish with white borders; corona stalked

Specific epithet refers to short stiff hairs

ASCLEPIAS INCARNATA Swamp Milkweed

P-R 6-8

Usually in wet areas.

Glabrous plant with little latex, branched stem, to 15 dm. tall.

Leaves in 7 or more pairs, glabrous, petioled, entire, lance-shaped; lateral veins ascend toward tip.

Flowers 8-9 mm. long, reflexed corolla lobes 4-5 mm. long.

Specific epithet, Lat., "flesh colored."

ASCLEPIAS PURPURASCENS Purple Milkweed

R 5-6

Open areas.

Slender plant, to 1 m. tall.

Leaves short-petioled, thick, minutely downy on underside, tapering at base; veins horizontal to leaf margin; some often whorled.

Corolla about 8 mm. long.

ASCLEPIAS QUADRIFOLIA

P 5-7

Upland, dry, rocky slopes.

Usually only 1 stem, leafless below.

Leaves usually in 1 or 2 whorls of 4, plus 1 or 2 pairs; long-pointed, glabrous.

Flowers fragrant, small, corolla purple, white inside; to 6 mm. long. Specific epithet refers to whorled leaves.

ASCLEPIADACEAE

ASCLEPIAS SULLIVANTII

P 6-7

Wet areas.

Leaves in 7 or more pairs, glabrous, very short-petioled; somewhat cordate, blunt, oblong; lateral veins horizontal to margin.

Purple corolla, pink inside.

Flowers 1.5-2 cm. long

ASCLEPIAS SYRIACA Common Milkweed

P 5-9

Roadsides, dry soils; often in large colonies, as it spreads underground.

Plant stout and downy.

Leaves short-petioled, oblong, fine-hairy on underside, upper surface dull green; lateral veins horizontal to leaf margins.

Frangrant flowers in 2-6 clusters scattered along stem to 2.5 cm. long

ASCLEPIAS TUBEROSA Butterfly Weed or Chigger Flower or Pleurisy Root

O 5-10

Dry areas, roadsides, etc.

Plants often grow in large clumps, and are not obviously milky as are those of most other species.

Stems hairy, usually branching above; to 7.5 dm. tall.

Leaves abundant, somewhat hairy, sessile, narrow and alternate.

Corolla orange (sometimes yellow).

Common name refers either to creatures it attracts, and to a disease it has been used to cure.

G-W 5-9

ASCLEPIAS VERTICILLATA Whorled Milkweed

Dry areas.

Stem slender, sparingly branched, to 7 dm. tall.

Leaves sessile, to 5.5 mm. broad, revolute.

Flowers green with white inside, in umbels of 2-14, from upper nodes.

Specific epithet and common names refer to leaf position.

G 5-8

ASCLEPIAS VIRIDIFLORA Green Milkweed

Rocky prairies and glades.

To 8 dm. tall.

Leaves opposite, very thick.

Lateral umbels (when present) sessile or on very thick peduncles. Flower to 13 mm. long. Specific epithet and common names refer to flower color.

G-P-V 5-6

ASCLEPIAS VIRIDIS Green Flowered Milkweed

Rocky (usually limestone) prairies and glades.

Erect, unbranched stem.

Leaves alternate, glabrous, broadly oblong.

Corolla lobes spreading and ascending; inside often purple, contrary to common name.

ASCLEPIADACEAE - ASTERACEAE

CYNANCHUM LAEVE Climbing Milkweed or Angle Pod W 7-9

Wet, waste areas; a weedy plant, difficult to eradicate.

Climbing vine with glabrous stem.

Leaves dark green, cordate at base.

Fragrant white flowers have erect corolla lobes, while in flower.

Specific epithet indicates that the plant is smooth.

MATELEA DECIPIENS Climbing Milkweed Br 5-6

Rocky, open areas, often along streams.

Vine capable of climbing trees.

Hairy in all parts.

Flowers maroon color, with ascending petals, sometimes 16 mm long.

Specific epithet, "deceiving", eludes us.

ASTERACEAE Composite Family

Often called **Compositae**

Inflorescence of many-flowered heads, subtended by involucral bracts, individual flowers small, hence called florets.

Florets of 2 types: strap-shaped or tubular; heads may consist of both sorts of florets, or of only one or the other; when both are present, the strap-shaped florets (or rays) surround a group of tubular florets (the disc), This accounting for generic names referring to the sun. (This is possibly also due to the fact that certain genera tend, at some periods in their growth, to turn towards the sun as it moves across the sky, as evidenced by French common name for **Helianthus**, "tournesol").

Neither type floret has a calyx, this being replaced by a pappus often adapted to disperse the fruits. (The parachute formed by dandelions is an example of a very successful such adaptation.)

Heads of florets are sometimes described as being chaffy, which term applies to scalelike bracts that subtend each floret in the head in certain genera.

ASTERACEAE Composite Family (con't.)

When stamens are present, their anthers always are united in a closed tube around the style which, in fertile florets, is always terminated by a 2-parted stigma.

Note that in the main Key at the front of this book all flowers (hereafter called florets) of this family are described as having indistinguishable parts.

Flower heads of the Asteraceae can be made up of either all ray, all disc, or both ray and disc florets. The following key is broken into these 3 categories.

I Heads with only strap-shaped florets; plants with milky sap

1 • Florets blue or bluish

2 Heads 2.5 cm.or more across . . . **Cichorium**

2' Heads 1.5 cm.or less across . . . **Lactuca floridana**

1' Florets neither blue nor bluish

3 Florets creamy to greenish-white, the heads in drooping clusters. . . **Prenanthes**

3' Florets yellow to orange (purple in **Tragopogon porrifolius**)

4 Most or all leaves basal

5 Heads clustered at top of stem. . . **Hieracium**

5' Heads solitary at top of stem or tip of branches

6 Involucral bracts in 2 series, the outer shorter and usually reflexed. . . **Taraxacum**

6' Involucral bracts in 1 series, equal, reflexed only in age. . . **Krigia**

4' Stem leaves present

7 Heads several to very numerous

8 Leaves entire to pinnately lobed; glabrous

9 Head less than 1 cm. across. . . **Lactuca**

9' Head more than 1 cm. across and involucre noticeably swollen at base . . . **Sonchus**

8' Leaves sometimes toothed, but never deeply cut . . . **Hieraceum**

7' Heads solitary at top of stem or tips of branches

10 Basal leaves deeply pinnately-lobed; stem leaves entire . . . **Pyrrhopappus**

10' Leaves all entire, clasping, usually grasslike. . . **Tragopogon**

ASTERACEAE Composite Family (con't.)

II Heads with only disc florets

1 Spines, prickles or hooked or bristly burs present on some or all the bracts of the involucre

2 Some or all of the involucral bracts with hooked tips, or enclosed by hooked bristles; bur-like

3 Florets greenish; staminate and pistillate florets in separate heads. . . **Xanthium**

3' Florets purplish; perfect. . . **Arctium**

2' Involucral bracts never hooked or bur-like (but some or all have spines or prickles at tip)

4 Heads showy, pink to purple

5 Pappus bristles plumose . . . **Cirsium**

5' Pappus bristles not plumose . . . **Carduus**

4' Heads not showy; florets greenish to yellow-green . . . **Ambrosia**

1 No spines, prickles or bristly burs present on bracts of the involucre

6 Florets purple to pink

7 Leaves opposite or in whorls . . . **Eupatorium**

7 Leaves alternate

8 Heads of 2-5 florets surrounded by leaf-like bracts . . . **Elephantopus**

8' Heads otherwise

9 Heads arranged in long, narrow, terminal cluster; leaves usually very numerous and becoming smaller towards the top . . . **Liatris**

9' Heads in more or less flat-topped, open cluster. . . **Vernonia**

6' Florets green, yellowish or white

10 Florets green or yellow-green

11 Plants usually aromatic . . . **Artemisia**

11' Plants not aromatic . . . **Iva**

10' Florets white, creamy or yellowish white, or yellow

12 Involucre with single row of erect bracts with edges meeting, and sometimes also a row of minute bracts at base

13 Leaves of different species very different, but always petioled; all flowers perfect; pappus barbed . . . **Cacalia**

ASTERACEAE Composite Family (con't.)

13' Leaves of our single species sessile to clasping except at very base; outer flowers of heads pistillate; pappus smooth . . . **Erechtites**

12' Involucre with 2 to several rows of overlapping bracts

14 Involucral bracts whitish and dry; plants woolly or cobwebby

15 Persistent leaf rosette with leaves smaller than those of stem; plants dioecious . . . **Antennaria**

15' Rosette leaves not persistent, not differing from stem leaves; plants monoecious . . . **Gnaphalium**

14' Involucral bracts greenish or partly green; plants not woolly or cobwebby

16 Leaves mostly opposite

17 Florets white to whitish . . . **Eupatorium**

17' Florets creamy and leaves petioled . . . **Brickellia**

16' Leaves mostly alternate

18 Leaves simple

19 Leaves petioled . . .**Brickellia**

19' Leaves not petioled . . **Kuhnia**

18' Leaves much dissected . . . **Matricaria matricariordes**

If you don't find your plant described above, it may be one of the rayless spp. of **Bidens**; see 2', 14', 16', 18' of next key.

III Heads with typical disc florets massed in the center and usually with strap-shaped florets surrounding them. This is typical of the Sunflower head, and so many plants of this general type bloom in confusing abundance during the late summer and fall that we offer the following short cut to field identification, which may spare you the trouble of working with the appended key We list below *only* the sunflower type "flowers" with yellow ray florets:

Heads in which the ray florets are fertile:

Bidens (in certain species only)
Chrysopsis
Grindelia
Helenium amarum
H. autumnale (usually)
Heliopsis
Polymnia
Silphium
Solidago
Verbesina helianthoides

ASTERACEAE Composite Family (con't.)

Ray florets neutral:

Bidens (usually)
Coreopsis (usually)
Helenium flexuosum
Helianthus
Ratibida
Rudbeckia
Verbesina alternifolia
V. helianthoides

Heads in which the disc florets are sterile, their styles undivided:

Polymnia
Silphium

1 Ray florets yellow

2 Leaves alternate (also see 2', 14', 16 below)

3 Flower heads mostly less than 2 cm. across, with short ray florets . . . **Solidago**

3' Flower heads larger than 2 cm. across. with long ray florets

4 Stems with rather prominent wings extending downwards from leaf bases

5 Ray florets wedge-shaped, 3-5 cleft . . . **Helenium**

5' Ray florets not wedge-shaped, not cleft . . . **Verbesina**

4' Stems without prominent wings

6 Rough. bristly plants with stout stems. the leaves deeply pinnately-lobed or twice pinnately-lobed extending well up the stem . . . **Silphium laciniatum**

6' Without the above characteristics

7 Plants with rigid leaves and bristly pointed teeth on leaf margins

8 Plants resinous . . . **Grindelia**

8' Plants not resinous, but with camphorlike odor . . . **Heterotheca**

7' Plants with soft leaves

9 Ray florets wedge-shaped, 3-5 cleft . . . **Helenium amarum**

9' Ray florets not wedge-shaped, not 3-5 cleft

10 Rays spreading

11 Disc and ray florets both yellow

12 Involucral bracts imbricated in several series . . . **Chrysopsis**

12' Involucral bracts in one equal series, sometimes with few, very reduced bracts below . . . **Senecio**

ASTERACEAE Composite Family (con't.)

11' Disc florets dark purple or brown . . . **Rudbeckia**

10' Rays drooping

13 Disc florets grayish . . . **Ratibida**

13' Disc florets dull greenish . . . **Rudbeckia**

2' Leaves opposite, or mostly so, with upper leaves often alternate

14 Plants with large stem leaves or large basal leaves with resinous juice, or sticky-hairy plants

15 Often with large basal leaves and resinous sap; "seeds" flat, winged and notched at top . . . **Silphium**

15' Usually without large basal leaves; usually with sticky hairs and a heavy odor; "seeds" thick . . . **Polymnia uvedalia**

14' Plants without resinous juice and not sticky-hairy

16 Plants usually more or less roughish hairy, with simple leaves, the lowermost opposite, the middle and upper sometimes alternate

17 Ray florets yellow, toothed, usually sterile; "seeds" flat . . . **Helianthus**

17' Ray florets apricot yellow, pistillate; "seeds" quadrangular . . . **Heliopsis**

16' Plants smooth, with entire to deeply pinnately-lobed or three times pinnately-lobed leaves

18 Leaves entire . . . **Coreopsis**

18' Leaf margins toothed . . . **Bidens** (some species have tiny rays, or none at all)

1' Ray florets white, blue or purple

19 Leaves alternate

20 Leaves simple

21 Ray florets not drooping

22 Pappus not composed of hairlike bristles

23 Pappus of several minute bristles and 2-4 that are stiff and longer, leaves smooth and thickish (sometimes turned edgewise . . **Boltonia**

23' Pappus of 1-3 awns, stem winged, rays white . **Verbesina virginica**

22' Pappus of hairlike bristles; leaves not smooth, not thickish and not turned edgewise, rays ranging from white to purple; stems not winged

24 Involucral bracts unequal, in 2 or more series . . . **Aster**

24' Involucral bracts of about equal length, in 1-2 series . . . **Erigeron**

ASTERACEAE Composite Family (con't.)

21' Ray florets drooping

25 Ray florets white; stem winged . . . **Verbesina virginica**

25' Ray florets purple; stem not winged . . . **Echinacea**

20' Leaves compound

26 Small heads (1 cm.or less across) with 4-6 short rays . . . **Achillea**

26' Heads larger than 1 cm; rays 10-20

27 Rays neutral; plants ill-scented . . . **Anthemis**

27' Rays pistillate; plants with pleasant odor . . . **Matricaria chamomilla**

19' Leaves opposite

28 Plants 7 dm or more tall; sticky-hairy . . . **Polymnia canadensis**

28' Plants smaller

29 Disc florets greenish or brownish-green; rays minute . . . **Eclipta**

29' Disc florets yellow; rays larger . . . **Galinsoga**

ACHILLEA MILLEFOLIUM Yarrow

W 4-11

Plant of dry, open areas.

Usually unbranched stems, 3-10 dm.tall; strong scented

Leaves gray-green and finely dissected, numerous along stem.

Inflorescence flattish-topped, each head less than 1 cm. across, with 4-6 white rays

Generic name refers to Greek hero, Achilles, who supposedly knew its healing powers, attested to in more modern times; specific epithet refers to dissected foliage as "thousand leaf."

AMBROSIA ARTEMISIIFOLIA Common Ragweed

G 7-11

Weedy plant of dry, rocky, eroded areas, etc.

Stem simple to much branched, to 10 dm. tall, variously hairy monoecious

Petioled leaves opposite below, alternate above, *deeply pinnately-lobed* (often 2x).

Pistillate heads in axils of leaves or bracts; staminate heads in long terminal inflorescence.

AMBROSIA TRIFIDA Horse Weed or Giant Ragweed

G 7-9

Weedy plant of rich, wet areas.

Differs from *A. artemisiifolia* in *leaf shape;* these are *palmately 3-5 lobed, or undivided; and* all are opposite.

ANTENNARIA PLANTAGINIFOLIA Pussy's Toes

W-P 3-6

Dry, rocky, usually acid soils, usually in large colonies

White-woolly stem 1-4 dm. tall; dioecious.

Leaves of basal rosette resemble those of Plantain; stem leaves much narrower, alternate, entire; all are very woolly.

Inflorescence of several terminal heads; those on female plants with involucre 5-10 mm tall, with white tipped bracts, often pinkish towards base; on male the involucre is smaller, the white tips of bracts wider and more conspicuous.

Generic name from presumed resemblance of pappus to a butterfly's antennae; specific epithet to basal leaves.

ANTHEMIS COTULA* Mayweed or Dog Fennel

W 5-11

Weed of barnyards, roadsides, etc.

Stem usually somewhat branched, subglabrous and 1-6 dm. tall; ill-smelling.

Leaves alternate, much dissected.

Heads several, about 2.5 cm. across, with 10-12 sterile rays, toothed at tips; disc florets yellow

ASTERACEAE

ARCTIUM MINUS* Common Burdock

P-V 7-10

Coarse plant of waste areas, to 1.5 m. tall.

Leaves broad, mostly cordate at base; on slightly angled, hollow petioles.

Involucre globular, the bracts ending in long stiff points, with hooks at their tips (it is these that form burs).

Heads 1.5-2.5 cm. broad, sessile or on short peduncles, consist of only disc florets.

ARTEMISIA Wormwood

G 6-11

Weedy, aromatic plants of various habitats, usually dry (Sagebrush is a species of this genus); Steyermark lists 7 native, 6 introduced species in Missouri.

Leaves alternate, entire to much dissected.

Inflorescence discoid, subtended by imbricated, dry involucre, which is never green; commonly nodding.

Common name comes from same root as Vermouth, in which a species of this genus is used; also seems to derive from the fact that it has been used to eliminate intestinal worms.

ASTER

Herbaceous plants with simple, alternate leaves.

Involucral bracts in 2 or more series, usually of different lengths

Heads of both disc and ray florets, the latter usually in a single series, and always pistillate and fertile Disc florets usually yellow, but may change to purple as florets mature.

1 Ray florets blue-purple or violet

  2 At least lower leaves both petioled and cordate at base

    3 Leaf margins entire

      4 Involucral bracts reflexed . . . **A. anomalus**

      4' Involucral bracts not reflexed . . . **A. azureus**

    3' Leaf margins somewhat serrate

      5 Involucral bracts elongate, with green tips . . . **A. drummondii**

ASTER (con't.)

2' None of leaves both petioled and cordate

6 Leaves sessile and at least partly clasping the stem

7 Leaves conspicuously clasping stem

8 Stout, rough-hairy plant; rays 40-50 . . . **A. novae-angliae**

8' Slender, rather brittle plant; rays 20-30 . . . **A. patens**

7' Leaves partly clasping stem

9 Plant hairy . . . **A. oblongifolius**

9' Plant smooth . . . **A. laevis**

6' Leaves not at all clasping, or very slightly

10 Leaves silky-hairy . . . **A. sericeus**

10' Leaves not silky-hairy

11 Leaves stiff and crowded on stem . . . **A. linariifolius**

11' Leaves soft, becoming smaller from bottom to top . . . **A. turbinellus**

1' Ray florets white

12 At least lower leaves both cordate and petioled, those of upper leaves also being winged . . . **A. sagittifolius**

12' Stem leaves sessile; basal leaves not both petioled and cordate

13 Leaves very narrow (at most 7 mm.wide), rigid, numerous, sessile . . . **A. ericoides**

13' Leaves wider

14 Involucral bracts with marginally inrolled tips (our most common species) . . . **A. pilosus**

14' Involucral bracts flat

15 Bracts with fairly broad, green tips, often suffused with purple, upwards . . **A. lateriflorus**

15' Bracts narrow, with long, usually appressed green tips . . . **A. simplex**

ASTER ANOMALUS

V 7-11

Rocky or dry open woods; prefers acid soil.

Stem stiffly erect; simple or branched above 0.3-1.5 m. tall.

Leaves rough pubescent; lower leaves petioled and cordate; mostly entire.

Involucral bracts recurving, narrow, slightly hairy and imbricate.

Inflorescence elongate; each head with 30-45 rays.

ASTERACEAE

ASTER AZUREUS Blue Devil

B 8-11

Glades, prairies, roadsides, rocky woods.

Stems stiffly erect, .3-1 m. tall; rough, slightly hairy.

Leaves sandpapery on both surfaces, entire or nearly so; the upper sessile, the lower much longer than broad, petioled and often somewhat cordate.

ASTER CORDIFOLIUS Blue Wood Aster

B 8-11

Rich moist or dry woodlands; bluffs; along streams.

Stems 0.25-2 m. usually glabrous; branching; slender.

Leaves thin, slender petioled, cordate; at least lower leaves definitely serrate.

Involucral bracts obtuse or with short, broad, often purple, tips.

Inflorescence longer than broad; each head with 10-20 rays.

ASTER DRUMMONDII

B 8-10

Rocky or dry open woods; thickets.

Stem and at least lower surface of leaves densely hairy.

Lower leaves somewhat serrate, cordate, on winged petioles.

Involucral bracts appressed with long green tips.

Rays 10-15.

(Similar to **A. sagittifolius** except in ray color; hairier; with shorter, appressed involucral bracts; smaller heads).

ASTER ERICOIDES Wreath Aster

W 7-10

Prairies; roadsides; rocky, open woods.

Stem hairy, with long, arching branches nearly covered with flower heads; bushy-branched; 3-10 dm. tall.

Leaves numerous, linear, sessile, small.

Heads numerous, small, often in 1-sided racemes.

ASTER LAEVIS Smooth Aster

V 8-10

Prairies, glades, open woods, roadsides, thickets.

Stem glabrous, often glaucous; stout; somewhat branched; to 1 m. or more tall.

Leaves thick, mostly glaucous and entire, smooth, leathery, the lower with winged petioles, the upper somewhat clasping.

Involucral bracts appressed, short-pointed, narrow, yellowish-white with green tips.

Inflorescence varies, with 15-30 rays.

ASTER LATERIFLORUS White Woodland Aster or Calico Aster

W 8-11

Stems slender, sometimes purplish, branching from below the middle, to 1 m.

Leaves thin, flexible, narrow, tapering at both ends, rough, usually hairy only along under surface of midrib, sometimes hairy over whole surface below.

Involucre of glabrous bracts in several series, firm, with conspicuous green or purplish midrib.

Inflorescence with small heads in 1-sided racemes; 10-20 rays; disc purplish; rays 4-6.5 mm. long.

ASTERACEAE

ASTER LINARIIFOLIUS Stiff-leaf Aster

V 8-10

Dry woods, ridgetops, upland slopes, in acid soils; rare in our area.

Stems usually in tufted groups, stiff, roughish, minutely hairy, and branching above; 1-5 dm. tall.

Leaves narrow, with only a central vein; numerous, stiff and with rough margins; sessile, becoming smaller towards top, until those on peduncles are reduced to bracts.

Involucral bracts firm, tightly imbricate, tapering to sharp tips.

Flower heads 1-several, at tips of ascending branches, each with 10-15 rays.

ASTER NOVAE-ANGLIAE New England Aster

P-V 8-10

Moist soils in low areas, near ditches, etc.

Stout stemmed plant with spreading, soft hairs; to 2.5 m tall.

Leaves crowded on main stem, clasping, lanceolate, entire, pointed.

Involucre of thin, glandular, often purple-tinged and recurved bracts.

Showy heads produced in close clusters, each on a very short, glandular, hairy, nearly leafless peduncle; rays 40-75.

ASTER OBLONGIFOLIUS Aromatic Aster

P-V 7-11

Limestone glades, prairies, bluffs and open slopes.

Stem stiffly erect, bushy branched, hairy and with crowded leaves

Oblong leaves at least partly clasping, crowded, scabrous, hard, entire

Involucral bracts narrow, imbricate, recurved, with long tips and gland-tipped hairs.

Each head at tip of very leafy branchlet; rays 20-30.

ASTER PATENS Spreading Aster

P-V 8-10

Dry soils; prairies or woods.

Stems slender, rather brittle, usually simple up to much-branched summit, rough, short-hairy, to 9 dm. tall.

Leaves entire, clasping.

Involucral bracts hairy, glandular, firm, scarious with spreading green tips.

Single heads on branches, with about 25 rays.

ASTER PILOSUS White Heath Aster

W 8-11

Ubiquitous.

Stem usually glabrous, to 15 dm. tall.

Basal leaves petioled, those above almost sessile; entire or slightly toothed; reduced upwards.

Involucral bracts loose, often imbricate, their margins with inrolled green tips.

Inflorescence, heads often racemose on upper sides of stiffish, spreading branches; rays 15-30, 5-10 mm.long.

Specific epithet Lat., "soft-hairy" misleading.

ASTER SAGITTIFOLIUS Arrow-leaved Aster

W 8-10

Rocky woods, ravines, glades, bluffs, etc.; mostly in open areas

Stem stiffly erect, glabrous or slightly pubescent in lines; to 2 m, tall.

Leaves shallowly toothed, glabrous or slightly pubescent on both surfaces; lower acuminate, cordate, long petioled, those above progressively less so, often with broadly winged petioles.

Involucre of imbricate, usually glabrous, very narrow bracts with elongate green tips.

Inflorescence: ascending, nearly erect branches of often-crowded racemose heads; rays usually 6-20.

ASTERACEAE

ASTER SERICEUS Silky Aster

V 8-10

Rocky glades and prairies, usually on limestone, but rare in our area.

Stem slender, wiry, erect, glabrous, with stiff, ascending branches; to 7 dm. tall.

Leaves hard, entire, covered with gray silky pubescence on both sides, much reduced on flowering branches.

Involucral bracts silky; slightly, if at all, imbricate; often recurved.

Heads at top of branches, in open inflorescence; rays 15-30, of a distinctive, pinkish color.

ASTER SIMPLEX Tall White Aster

W 8-10

Moist areas, low bottomlands, etc.

Stem stout, glabrous below, usually pubescent in lines above; 6-15 dm. tall.

Leaves narrow, usually serrate and glabrous on both sides.

Involucral bracts acute, glabrous except for sometimes hairy margins; narrow with elongate, usually appressed green tips.

Inflorescence of usually many heads on elongate, leafy peduncles; rays 20-40.

ASTER TURBINELLUS Prairie Aster

V 8-11

Dry soils (often acid); prairies, edges of woods, etc.

Stem mostly glabrous, slender, usually solitary, panicled above, with long branches, to 1 m. tall.

Stem leaves tapering at both ends, entire, smooth except for scabrous margins; lowest leaves petioled, those above sessile

Bracts of cylindrical involucre straw-colored at base, but green tipped; rather blunt, linear; very unequal, appressed.

Inflorescence elongate, rays of showy heads 12-25.

BIDENS Beggar Ticks

Leaves opposite, with toothed margins.

Involucre double, the bracts often separate to their bases.

Bidens Lat., "two toothed" as the fruits often are; common name refers to resemblance of these fruits to that unpopular arachnid.

1 Leaves simple . . . **B. cernua**

1' Leaves compound

2 Leaves once divided, with 3-7 serrate leaflets; showy rays 10-25 mm. long . . . **B. polylepis**

2' Leaves twice divided, appearing fernlike; rays very short or absent . . . **B. bipinnata**

BIDENS BIPINNATA Spanish Needles

Y 8-10

Open grazed woods, glades, pastures, etc.

Square stem; 3-9 dm. tall.

Leaves fernlike.

Many-flowered heads, with no rays, or few that are very short.

Specific epithet Lat. for leaf form; common name refers to sharp teeth of the fruit, and the incorrect assumption that the plant was introduced on this continent by the Spanish.

BIDENS CERNUA Sticktight or Nodding Bur-Marigold

Y 8-10

Wet areas.

Stem usually hairy, often much branched, to 1.8 m. tall.

Lance-shaped leaves meet around stem.

Outer involucral bracts widely spreading, longer than inner; foliaceous, sometimes reflexed.

Ray florets usually present, and bright yellow; heads tend to nod in flower and in fruit.

Common names refer to tick-like propensities and similarity to garden plant.

ASTERACEAE

Y 8-10

BIDENS POLYLEPIS Tickseed Sunflower

Wet prairies, meadows, etc., often in large colonies.

Leaves pinnately compound, with 3-7 serrate leaflets.

Many outer involucral bracts, 7-20 mm. long, tapering and conspicuously hairy.

Flowering heads very showy, the rays much longer than the bracts.

Specific epithet Lat., "many scales," probably referring to the many (12-25) outer involucral bracts.

P 7-10

BOLTONIA ASTEROIDES

Moist, low areas.

Stem slender; simple or with loosely ascending branches; to 7 dm. tall.

Leaves alternate, not dissected, smooth and thickish, often turned sideways.

Involucral bracts appressed, imbricate and with membranaceous margins.

Heads usually few, but crowded into flattopped inflorescence.

Rays pistillate, numerous (20-40); disc florets yellow.

Specific epithet Lat., "resembling asters."

G-Y 7-10

BRICKELLIA GRANDIFLORA Tassel Flower

Rocky open areas with limestone substrate (but rare in our area); fetid odor.

Herbaceous, nearly glabrous, 3-7 dm. tall.

Leaves mostly alternate, long petioled, triangular, coarsely serrate, with rounded teeth.

Heads slender-pedicelled; discoid, with 20-38 florets.

Common name for shape of heads.

CACALIA Indian Plantain

Smooth, tall, perennial herbs with alternate, usually petioled leaves.

Heads discoid; rather large, in flat inflorescence; head 5-flowered, and subtended by 5 involucral bracts.

1 Lower leaves entire or with shallow teeth; principal veins end at leaf tip . . . **C. tuberosa**

1' Lower leaves coarsely toothed, angled or lobed; principal veins spreading and ending in teeth, angles or lobes

2 Stem and at least lower surface of leaves glaucous; margins between teeth smooth . . . **C. atriplicifolia**

2' Stem and both surfaces of leaves green; margins between teeth fine-hairy . . **C. muhlenbergii**

CACALIA ATRIPLICIFOLIA Pale Indian Plantain G-W 6-10

Open and rocky woods, bluffs, thickets with limestone substrate.

Stem round in cross-section; glaucous; 6-20 dm.tall.

Lower leaves broadly triangular, or heart-shaped and angled; at least their lower surface glaucous; principal veins palmate.

Heads discoid; usually with only 5 florets.

First part of common name due to bloom on stem and leaves.

CACALIA MUHLENBERGII G-W 5-9

Rich woods, wooded slopes and bluffs; prefers limestone substrate

Stem angled or grooved, 1-3 m.tall.

Leaves semicircular or kidney-shaped; principal veins palmate

Heads of about 5 discoid florets in large corymbed inflorescence

CACALIA TUBEROSA

W 5-8

Prairies, glades, rocky woods, hillsides.

Stem angled and grooved, 6-20 dm. tall.

Lower leaves lance-ovate, with principal veins almost parallel; entire or with only a few, shallow teeth; lower leaves taper into long petioles, upper leaves on short, winged petioles.

Heads with about 5 discoid florets.

CARDUUS NUTANS* Musk Thistle or Plumeless Thistle

P-B 5-10

Waste areas, particularly along roadsides.

Grooved stem with spiny wings; to 2 m. tall.

Leaves alternate, spiny and decurrent; sessile, often pinnate.

Heads of all disc florets large, often nodding, solitary; showy, on partly naked peduncles.

Specific epithet Lat., "nodding."

CHRYSANTHEMUM LEUCANTHEMUM* Ox-eye Daisy

W 5-10

Weedy plant of open areas.

Stem simple, or divided above; slender; 0.3-1 m. tall.

Basal leaves are rounded and only toothed, upper more deeply cut, not petioled.

Heads solitary, with fertile, white rays and yellow disc corollas

Specific epithet Lat., "bearing white flowers."

CHRYSOPSIS VILLOSA Golden Aster

Y 6-10

Rocky or sandy, dry areas.

Several stems, more or less hairy; to 10 dm. tall.

Leaves alternate, numerous, narrow (3-15 mm. wide), the lower sometimes short-petioled, but all tapering to base; rarely toothed.

Heads several, many florets in each head; rays numerous, pistillate.

CICHORIUM INTYBUS* Chicory

B 5-10

Weedy plant of open areas.

Stem stiff and furrowed; branching.

Stem leaves oblong, partly clasping, those of the rigid flowering branches tiny; lower leaves sharply cut, pinnately, with the segments pointing backwards.

Heads (of all ray florets) erect, sessile, 2 or 3 together; florets close about noon on a sunny day and do not keep their color after picking.

CIRSIUM

Heads of all disc florets large.

Stem leaves alternate, prickly, sometimes decurrent along stem, sessile.

Name Gr., "swollen vein" which this genus was once thought to relieve.

1 Upper half of stem winged; leaves deeply pinnately-lobed, the lobes armed with long prickles, upper surface of leaves with stiff bristles . . . **C. vulgare**

1' Stem not winged, leaves simple, upper surface with weak (if any) hairs

2 Main leaves of stem deeply cut; margins revolute . . . **C. discolor**

2' Main leaves of stem not deeply cut; margins flat . . . **C. altissimum**

ASTERACEAE

P 7-10

CIRSIUM ALTISSIMUM Tall Thistle

Dry, rocky open areas and thickets.

Stem branching below; pilose, to 4 m. tall.

Leaves undivided, toothed with weak marginal and terminal prickles; simple, gray-hairy on lower surface.

P 8-11

CIRSIUM DISCOLOR Field Thistle

Open, waste areas.

Flowering stem deep-furrowed, usually branching above; 1-3 m.tall

Leaves densely white-hairy below, green on upper surface; deeply pinnately-lobed and reduced upwards on the stem; prickly.

Heads usually solitary, with the uppermost, sessile leaves forming a false involucre.

P 5-10

CIRSIUM VULGARE* Bull Thistle

Pastures, waste ground, roadsides.

Upper half of stem and branches winged by prickly, wavy strip of decurrent leaf tissue; 1-3 m,tall.

Main stem leaves deeply cut, their margins often revolute; lobes bristle tipped.

Common name due to formidable needle-like prickles on involucre and spines on stems and leaves.

COREOPSIS Tickseed

Leaves usually opposite and entire.

Flower heads radiate, usually with 8 ray florets, yellow, conspicuous and neutral

Generic name Gr., "bug-like," refers to fruit, as does Tickseed.

1 Most or all leaves simple, entire, or with 2 short, lateral lobes

2 Leaves lanceolate, all near base of stem, 2-4 pairs . . . **C. lanceolata**

2' Leaves at base of stem ovate; extending at least to mid-stem, 6-10 pairs **C. pubescens**

1' Most or all leaves 3-5 parted

3 Leaves sessile, with 3 narrow lobes . . . **C. palmata**

3' At least the lower leaves petioled; compound, with 3-5 stalked leaflets . . . **C. tripteris**

COREOPSIS LANCEOLATA

Y 4-7

Rocky or sandy, dry open areas; common and showy.

Glabrous stem, branching, leaves chiefly near base, to 8 dm. tall.

Leaves usually simple, lanceolate petioled near base of stem, sessile above.

COREOPSIS PALMATA Stiff Tickseed

Y 5-6

Prairies, glades, fields, rocky woods, thickets

Stems glabrous but hairy at nodes, leafy, unbranched; to 9 dm. tall

Leaves sessile, 3-lobed, appearing to be verticillate

Specific epithet refers to lobing of leaves into narrow segments

ASTERACEAE

COREOPSIS PUBESCENS Star Tickseed

Y 5-10

Rocky, open woods, base of wooded bluffs, gravelly stream beds

Stem leafy throughout, usually with short, loosely spreading hairs; to 12 dm tall

Leaves relatively broad (to 4 cm. wide), simple, or with paired, smaller leaves at their base; lower leaves petioled, upper sessile.

Specific epithet Lat., "hairy".

COREOPSIS TRIPTERIS Tall Tickseed

Y 7-9

Open, dry areas

Stem usually glabrous and somewhat glaucous; to 3 m. tall.

Leaves petiolate, pinnately divided into 3-5 segments

Heads few to many, in open, terminal inflorescence.

Disc florets originally yellow, but turn to brownish-purple.

Specific epithet Lat., "3-winged" for ternately divided leaves.

ECHINACEA

Coarse plants, with simple stems, to 1 m. tall or more.

Leaves simple and alternate.

Heads large and showy; solitary and terminal; rays mostly drooping, rather persistent, neutral, but sometimes with rudimentary pistil.

Name Gr., "sea urchin," referring to sharp pointed scales of the chaff.

ECHINACEA PALLIDA Pale Purple Coneflower

P 5-7

Open areas with limestone substrate.

Stem dark green or purplish, with spreading hairs; to 1 m. tall.

Leaves linear to lanceolate, usually *5-20 times as long as wide;* tapering to long, hairy petiole; parallel veined.

Coneflower refers to shape of receptacle.

ECHINACEA PURPUREA Purple Coneflower

P-V 5-10

Prairies, dry, open woods, etc.

Stem conspicuously hairy or occasionally glabrous; 5-15 dm tall

Leaves broad *(1.5-5 times as long as wide)* usually somewhat toothed; the basal long-petioled, stem leaves progressively less so.

Disc florets bronzy.

Common name: see above.

ECLIPTA ALBA

W 7-10

Low, moist areas.

Weak, hairy plant, often rooting at nodes; stems to 9 dm. long.

Leaves lanceolate to linear, acute; narrowed to sessile, or short-petioled, base; opposite; slightly serrate.

Heads solitary, small; rays minute.

Generic name Gr., "to be deficient" refers to lack of pappus.

ASTERACEAE

ELEPHANTOPUS CAROLINIANUS

P-V 8-10

Low areas, usually dry and open.

Stem leafy, rough-hairy below, usually smooth above; to 1 m. tall.

Leaves alternate, large, thin, with rounded teeth.

Heads of only 2-5 tubular florets; heads grouped into sort of compound inflorescence, surrounded by 1-3 leaflike bracts.

Generic name Gr., "elephant's foot," refers to shape of large lower leaves.

ERECHTITES HIERACIFOLIA Fireweed

W 7-11

An erect plant of rocky, open woods; eroded slopes; rank smell.

Stem grooved, often hairy, to 3 m. tall.

Leaves alternate, simple, variably lance-like; abundant, acute, serrate, sessile, often with broad bases somewhat clasping; mid-vein sometimes whitish.

Many-flowered discoid heads which barely emerge from surrounding involucral bracts.

Specific name refers to leaves like those of **Hieraceum** (which see); common name because plant often grows in burned over areas.

ERIGERON Fleabane

Genus very similar to **Aster**, with the following differences:

1 **Erigeron**, in general, blooms earlier than does **Aster**.

2 Involucral bracts are not imbricate as in **Aster**; in **Erigeron** they are either in a single series and of equal length; or a longer series surrounding the head may be subtended by a very short, basal series of bracts

3 Involucral bracts are never leathery, leaf-like, or green-tipped, as they often are in **Aster**

Disc florets are always yellow, ray florets pistillate.

Common name from early belief that dried floral heads drive off fleas

ERIGERON Fleabane (con't.)

1 Rays few and inconspicuous . . . **E. canadensis**

1' Rays conspicuous

2 Stem leaves clasping

3 Leafy runners from base of plant; disc 12-20 mm. broad . . . **E. pulchellus**

3' No leafy runners from base of plant; disc 7-13 mm. broad . . . **E. philadelphicus**

2' Stem leaves not clasping

4 Main stem leaves regularly and sharply toothed . . . **E. annuus**

4' At least upper stem leaves entire (other stem leaves entire to irregularly toothed) . . . **E. strigosus**

ERIGERON ANNUUS Daisy or Whitetop Fleabane

W or V 5-11

Fields, roadsides, waste areas in cities.

Coarse plant with firm, round stems to 1.5 m. tall sparsely hairy, with spreading, rigid hairs.

Stem leaves not clasping, but coarsely and sharply toothed; conspicuously hairy on margins; alternate; lowest taper to slightly winged petiole.

ERIGERON CANADENSIS Horseweed or Canada Fleabane

W 6-11

Common weed of open areas.

Stem erect, hairy, simple below the inflorescence; to 1.5 m. tali.

Leaves narrow, hairy; often with marginal bristles. lower leaves petioled and slightly toothed; upper sessile and mainly entire.

Inflorescence open and with few-flowered heads: these appear greenish due to fact that long, thin involucral bracts (often brown with pale tips) hide the minute ray florets.

ASTERACEAE

ERIGERON PHILADELPHICUS

P-W 4-6

Open areas, particularly those that are wet.

Stems soft, 2-7 dm. tall.

Leaves usually with long, spreading hairs; the lower leaves sessile, the upper clasping; serrate.

Heads nodding, when in bud; many rayed.

Flowers slightly fragrant.

ERIGERON PULCHELLUS Robin's Plantain

P 4-6

Rocky, well-drained areas, usually in the woods (never found in the city).

Stem soft, hollow, with long, soft hairs, and with runners at its base that terminate in rosettes of leaves; to 7.5 dm. tall.

Stem leaves distant, reduced upwards; alternate, clasping.

Inflorescence loose and showy; 2-5 long peduncled heads.

Specific name Lat., "handsome."

ERIGERON STRIGOSUS

W 5-9

Prairies, glades, dry, open areas.

Stem sparsely leafy; usually hairy with appressed short hairs; to 1 m. tall.

Leaves firm, at least upper ones of stem entire or nearly so; basal leaves narrowed to slender petiole and toothed.

This species is very similar to **E. annuus** but differs in having upper stem leaves entire, hairs not so spreading, and in being generally shorter.

Specific name Lat., "straight, appressed hairs."

EUPATORIUM Thoroughwort

Leaves mostly opposite, often glandular-punctate, the lowermost reduced and soon deciduous.

Heads with only disc florets.

Common name from species with perfoliate leaves.

1 Some or all stem leaves in whorls of 3-7 . . . **E. purpureum**

1' Stem leaves mostly opposite

2 Leaf bases surrounding stem . . . **E. perfoliatum**

2' Leaf bases distinct

3 Heads with 8-40 florets

4 Larger, principal leaves sessile . . . **E. perfoliatum**

4' Larger, principal leaves petioled

5 Plants ashy-colored; flower heads mainly with 12-15 florets . . . **E. serotinum**

5' Plants not ashy-colored; flower heads mainly with 15-40 florets

6 Florets white . . . **E. rugosum**

6' Florets blue . . . **E. coelestinum**

3' Heads with 3-7 florets; leaves strongly 3-nerved, 8-30 mm. wide, barely petioled, if at all . . . **E. altissimum**

EUPATORIUM ALTISSIMUM Tall Thoroughwort

W 8-10

Open areas or alluvial thickets.

Stems downy, very leafy and hairy; to 2 m. tall.

Leaves in 20-30 or more pairs, firm, sessile or nearly so, with 3 (sometimes 5) prominent veins from base.

Flowering heads with 5 florets (or 3-7).

Specific epithet and 1st part of common name refer to same characteristic.

ASTERACEAE

B 7-10

EUPATORIUM COELESTINUM Mist Flower or Wild Ageratum

Moist, low areas; thickets.

Stem downy, branching, 0.3-1 m. tall.

Leaves petioled, mostly opposite, coarsely blunt-toothed, with tufts of small leaves at the base of the petioles.

Each head with 35-70 bright blue (or purplish) disc florets.

Specific epithet Lat., "heavenly blue."

W 7-10

EUPATORIUM PERFOLIATUM Thoroughwort or Boneset

Found in low wet areas, or on wet ledges of bluffs.

Coarse, hairy plant to 1.5 m. tall.

Leaves opposite, either surrounding stem, or distinct; tapering to a long tip; hairy on lower surface; toothed.

Specific epithet Lat., refers to, for the stem growing through the leaves as does first common name; second refers to early use of this species in the treatment of the bone-breaking chills and fevers of malaria and other diseases)

P-V 7-9

EUPATORIUM PURPUREUM Green-stemmed Joe-Pye Weed

Low, moist areas; plant with a fragrance similar to that of vanilla.

Stem slender. green of suffused with pruple, dark purple at nodes. slightly glaucous and/or glabrous, solid, to 2 m. tall

Leaves in whorls of 2-5; thinnish, long pointed, sharply toothed, glabrous above.

Flower heads slenderly cylindrical, with only 3-7 florets.

Specific name for dark purple of stem at nodes.

EUPATORIUM RUGOSUM White Snakeroot

W 7-10

Rocky areas, thickets, woodland borders.

Stems firm, solitary or clustered, to 1.5 m. tall.

Leaves ovate, tapering to long acuminate tip; coarsely and sharply toothed, thin, petioled.

Heads with 12-24 florets, giving a rather fluffy appearance.

Specific epithet Lat., "wrinkled," perhaps from veininess of the leaves. The common name was apparently due to incorrect identification of this plant as it was not used to cure snakebite but it did have other implications for the pioneers. It was proven to be the cause of the very serious and often fatal milksickness traced to cows that had foraged on this **Eupatorium** species.

EUPATORIUM SEROTINUM

W 8-10

Open areas, often wet; a very weedy plant.

Stem erect, hairy and bushy-branched above, with an ashy color, to 9 dm. tall

Leaves coarsely toothed, long petioled, usually less hairy than the stem.

Heads of 12-15 florets.

Specific epithet Lat., "late flowering"

GALINSOGA CILIATA* Quick-weed

W 5-11

Common garden weed; found also in waste places.

Hairy plant; stem to 7 dm. tall.

Leaves opposite, 3-nerved, petioled, coarsely serrate, to 8 cm. long.

Heads with 4-5 rays, to 2 mm. long and shallowly lobed.

Specific name Lat., "marginal hairs" refers to involucral bracts; "Quick-weed" because it grows so fast from seed.

ASTERACEAE

GNAPHALIUM OBTUSIFOLIUM Cudweed or Sweet Everlasting

W 7-11

Open areas: fields, meadows, prairies, etc.

Branching stem, covered with felt-like hairiness; to 1 5 m. tall.

Leaves narrowed to base and sessile, wavy; felt-like hairiness on lower surfaces; numerous, alternate.

Heads in close clusters at tips of branches.

Generic name Gr., "a lock of wool," refers to white, felty covering of a stem and lower leaf surfaces. The plant has a distinct odor described by some as balsam-like, by others as like molasses, by others still as similar to that of curry powder.

GRINDELIA LANCEOLATA Gum Plant

Y 6-10

Rocky areas, usually on a limestone substrate. This species has only recently been found in our area as an escape; it is endemic to the southern part of Missouri, and is found growing naturally only from Alabama to Texas, and north to Tennessee, Missouri, and Kansas.

Stem sparsely hairy (if at all), branched above, to 15 dm. tall.

Leaves usually alternate and toothed, the middle ones sometimes slightly clasping.

Several heads with 15-30 lemon yellow, pistillate rays; involucre slightly sticky in this species, and loosely spreading

Common name for sticky involucre.

HELENIUM

Species of this genus found in our range are readily identified as members of the genus because the few ray florets are lobed and drooping.

1 Leaves very narrow (usually not over 2 mm. broad); stem not winged . . . **H. amarum**

1' Leaves glandular punctate; 5-55 mm. broad; stem winged

2 Disc brown or purple, rounded; rays not fertile . . . **H. flexuosum**

2' Disc yellow, flat; rays fertile . . . **H. autumnale**

HELENIUM AMARUM **Sneezeweed, Bitterweed, Yellow Dog Fennel**

Y 6-11

Waste areas and roadsides, in the southern part of our range.

Smooth, very leafy plant usually much branched; to 7 dm. tall.

Leaves threadlike, entire, sometimes whorled.

Heads several to numerous, on naked peduncles extending beyond leafy stem; rays 5-10, lemon yellow, pistillate

All the common names refer, as does the specific epithet, to the bitter resinous substance it produces, a substance said to be narcotic and poisonous to grazing stock, and to make their milk unpalatable.

HELENIUM AUTUMNALE **Common Sneezeweed**

Y 8-11

Wet areas.

Stem very leafy, but basal leaves are deciduous by flowering time; stem winged; to 15 dm. tall.

Leaves sessile, decurrent along stem, lance-shaped and usually serrate with translucent spots.

Rays 10-20, usually pistillate.

HELENIUM FLEXUOSUM **Purple-headed Sneezeweed**

Y and P 6-11

Wet areas

Stem hairy, winged, branches stiffly ascending; to 11 dm. tall.

Leaves smaller, less numerous than in **H. autumnale**; usually downy and densely glandular-punctate; sessile and entire.

Disc of purple or brownish florets; rays 5-20, neutral, sometimes tinged with purple at the base.

ASTERACEAE

HELIANTHUS Sunflower

This is a difficult genus to describe, as almost no single characteristic applies to every species. The following, however, usually hold true:

1 The ray florets are never orange, always definitely yellow

2 The ray florets are never pistillate.

3 The involucral bracts are always in 2 series.

4 Individual disc florets each subtended by a chaffy bract.

5 Pappus consists of 2 (rarely more) small, ultimately deciduous, scales. Note also, that the members of any given species of this genus tend to be extremely variable.

1 Main leaves of stem very narrow, up to 1.5 cm. broad; upper stem. leaves, involucral bracts with short. gray-white. appressed hairs; some or all of leaf blades folded lengthwise . **H. maximilianii**

1' Main stem leaves broader

2 Most or all leaves alternate

3 Leaves never more than 4 times as long as broad: disc often purplish-red . . . **H. annuus**

3' Main leaves of stem usually 7 or more times as long as broad; disc always yellow . . . **H. grosseserratus**

2' At least all of lower leaves opposite; disc florets yellow; at least outer involucral bracts spreading and long-tipped; 8-15 pairs of leaves gradually decreasing in size upwards on stem: heads 4-9 cm. broad

4 Leaves sessile, or on very short petioles

5 Lowest side veings ascending from midribe 2 or more cm. above leaf base . . . **H. mollis**

5 Lowest side veins ascending from leaf base or less than 2 cm. above it: stem usually hairy

6 Stem and both sides of leaves densely gray-hairy; leaves sometimes clasping . . . **H. mollis**

6' Leaves dark green and rough-hairy on upper surface. very short petioled (to 4 mm.) **H. hirsutus**

4 Main leaves with petioles longer than 5 mm.

7 Principle leaves with one main nerve . . . **H. grosseserratus**

7' Principle leaves with 3 main nerves; stems more or less hairy; lower surface of leaves often with yellow or white dots as well as hairs

8 Upper leaves alternate; petioles at least partly winged . . **H. tuberosus**

8' Upper leaves usually opposite; petioles only slightly, if at all, winged . **H. hirsutus**

HELIANTHUS ANNUUS Common Sunflower

Y 6-11

Waste areas, prairies, in vacant city lots.

Coarse, branching annual, to 3 m. tall.

Most leaves alternate, rough-hairy, serrate, slender-petioled; heart or spade-shaped.

Heads large, the dark disc 5 or more cm. across.

This is the parent of cultivated sunflowers.

HELIANTHUS GROSSESERRATUS Sawthooth Sunflower

Y 7-10

Low, wet areas

Stem to 4 m. tall, hairy above, but glabrous and often glaucous below; often many stems from base.

Leaves mostly alternate, thick, firm, long petioled, and these often winged; scabrous on upper surface, white-hairy below; one main vein from the base.

Heads few to several, disc yellow and 1-2 cm. across.

Common name for coarse serration of main leaves; this also explains the specific epithet.

HELIANTHUS HIRSUTUS Rough Sunflower

Y 7-10

Rocky, dry, open areas.

Stem covered with stiff hairs, often reddish; to 2 m. tall.

Upper leaves often opposite; short petioled; upper surface green and rough-hairy, lower copiously hairy; sharply serrate, 3-veined.

Disc 1-2 cm across, yellow

ASTERACEAE

HELIANTHUS MAXIMILIANI

Y 7-10

Limestone glades, or other dry, open areas.

One to several stems, simple to just below branching inflorescence; conspicuously gray-white, with short, appressed hairs, especially towards top.

Leaves also gray-hairy; very narrow, some or all folded lengthwise; numerous, alternate above and with recurving tips.

Flower heads develop close to the stem, in spike or raceme-like inflorescence; disc yellow, 2-3 cm. across.

HELIANTHUS MOLLIS Ashy Sunflower

Y 7-10

Open prairies, glades, thickets and along railroad tracks (usually dry areas).

Stem densely gray-white hairy; one to several in a group; simple or branched above; to 1 m. tall.

Leaves opposite, hairy on both surfaces, sessile; sometimes somewhat clasping, egg-shaped.

Disc yellow, to 3 cm. across.

Common name from color, due to long, soft hairs.

HELIANTHUS TUBEROSUS Jerusalem Artichoke

Y 8-10

Usually found in moist areas.

Stout stem very rough-hairy, usually branching only above, to 3 m. tall.

Leaves thick, hard, rough-hairy on upper surface, downy on lower; egg-shaped, coarsely toothed; upper alternate, lower opposite; petioles of varying length, often winged, odor of chocolate, when crushed.

Disc to 2.5 cm. across, yellow.

Common name from mispronunciation of "*Girasole articiocco* which means "vegetable that turns to the sun' . and which brings us right back to Sunflower.

HELIOPSIS HELIANTHOIDES Ox-eye

Y 5-10

Fields, roadsides, woodland borders, etc.

Stem smoothish, to 1.5 m. tall; simple or branched above.

Leaves opposite, petioled, serrate, 3-veined, slender pointed.

Disc to 2.5 cm. across, yellow; rays are also yellow, sometimes pale yellow.

Both terms of name refer to similarity to **Helianthus.**

HETEROTHECA LATIFOLIA Golden Aster

Y 8-11

Sandy open waste ground.

Stem hairy, to 2 m. tall.

Alternate leaves oval to oblong; the lower petioled and auricled at base; upper sessile and clasping.

Ray florets yellow, pistillate, fertiel; disc florets yellow, usually fertile, style branches flattened.

Generic name Gr., refers to dissimilar fruits formed by ray and disk florets.

HIERACIUM Hawkweed

Plants with hairy stems and leaves, as well as milky sap.

Small heads (to about 2.5 cm. across); with many rays, all perfect.

Name Gr., "hawk", referring to report by Pliny and others that species of this plant were used to strengthen the eyes; hence, the common name.

1 Hairs on leaves and near base of stem very long (1-2 cm.) . . . **H. longipilum**

1 Hairs when present less than 2 cm. in length.

2 Leafy bracts present on branches of inflorescence, heads with 40-50 or more florets . . . **H. scabrum**

2' No leafy bracts on branches of inflorescence; heads with 15-35 florets . . . **H. gronovii**

HIERACIUM GRONOVII Hairy Hawkweed

Y 5-10

Dry areas.

Stems conspicuously spreading-hairy toward base; upper part leafless, or nearly so; to 1.5 m. tall.

Leaves bristly hairy on upper surface, stellate-hairy on lower; broadly ovate and somewhat petioled at base of stem; gradually reduced upwards; sometimes with reddish-brown hairs to 3 mm. in length.

Inflorescence more or less elongate, with stalked glands on flowering stems, just below the involucre; heads with 15-35 ray florets.

HIERACIUM LONGIPILUM Long-haired Hawkweed

Y 7-9

Prairies; rocky, open areas, especially those that are dry.

Stem stiff, to 1.5 m. tall; densely long-hairy (sometimes to 2 cm.) below (hairs on both stems and leaves originally white, but turn to rust-color); the upper stem sometimes being glabrous and almost glaucous.

Leaves also very hairy; crowded at base of stem, but reduced upwards.

Inflorescence more or less elongate, usually narrower than in **H. gronovii**, and with more stalked glands on flowering stems.

Heads with 40-60 (sometimes more) florets.

HIERACIUM SCABRUM

Y 6-9

Dry, open woods, pastures and clearings: a common species

Stem stout, coarse-hairy; often red-tinged, leafy, to 1 5 m. tall

Elliptical leaves, often deciduous at base before flowering time, but extending to inflorescence; mostly entire; scattered-hairy on upper surface, longer and denser on lower midrib and petioles.

Heads 40-50 florets, on thick pedicels, in a stiff grouping; involucre with blackish, gland-tipped hairs

Specific epithet Lat., "harsh" referring to roughhairiness.

IVA CILIATA Marsh Elder or Sump Weed

G-W 7-10

Alluvial soils and/or other wet areas.

Stem hairy and coarse, sometimes shrubby, to 2 m. tall.

Leaves thickish, with long, slender, ciliate petioles; ovate, pointed, coarsely serrate, downy on lower surface.

Flower heads all discoid; monoecious, the male florets few and marginal.

Common name refers to preferred habitats.

KRIGIA Dwarf Dandelion

Small plants with milky sap, branched from the base, and with mainly basal leaves; stem leaves, when present, are alternate and clasping.

Heads of perfect ray florets only

1 1-3 leaves present on flowering stem which branches above, bearing 2-7 heads . . . **K. biflora**

1' Leaves all basal; flower stem leafless, unbranching, with one head at its tip

2 Flowering stem sturdy, mostly lacking hairs . . **K. dandelion**

2' Flowering stem very thin, noticeably hairy . . . **K. virginica**

KRIGIA BIFLORA

O 4-8

Rocky, open woods, especially in low areas.

Flowering stem branching above, bearing 2-7 heads; bluish green, smooth, to 8 dm. tall.

1-3 leaves present on flowering stem; clasping.

Orange-yellow heads about 3.8 cm. across.

ASTERACEAE

Y 4-6

KRIGIA DANDELION

Prairies, rocky glades, usually in acid soil.

Stem unbranched and leafless; glabrous and somewhat glaucous; to 30 cm. or more tall.

Leaves only basal; mostly toothed, or with a few shallow lobes; glabrous.

KRIGIA VIRGINICA Dwarf Dandelion

Y 5-8

Usually in open areas with acid soil.

Flowering stalks very thin, usually hairy; to 3 dm. tall; several to a plant, becoming leafy and branched.

Earlier leaves roundish and entire, later narrow and usually pinnate or irregularly lobed.

KUHNIA EUPATORIOIDES False Boneset

W-B-V 7-10

Dry, open areas.

Stems minutely hairy above; to 1.5 dm. tall.

Leaves very variable in shape, but usually alternate; gland-dotted on lower surface.

Discoid heads creamy white.

Specific name refers to its similarity to some species of **Eupatorium** — See key for some differences, perhaps most obvious of which is the creamier color of this plant.

LACTUCA Wild Lettuce

Stems leafy, to 3 m. tall.

Leaves alternate, usually pinnately lobed.

Ray florets only; usually numerous.

This is the genus from which our edible lettuce **(L. sativa)** was developed; name derived from Lat., "milk", refers to milky sap.

1 Florets usually blue (rarely cream-colored), sap white . . . **L. floridana**

1' Florets usually yellow

2 Lower stem and undersurface of leaf mid-rib with stiff bristles or prickles, margins of leaves prickly toothed, sap white . . . **L. scariola**

2' Lower stem, mid-rib of leaves, margins of leaves not as above (lower stem sometimes prickly-bristly in **L. saligna**)

3 Leaves relatively narrow and/or with narrow lobes; heads with 5-12 florets, stem to 10 dm. or more tall; sap white . . . **L. saligna**

3' Lower leaves broader; heads with 12-20 or more florets; stem to 35 dm. tall; sap tan . . . **L. canadensis**

LACTUCA CANADENSIS

Y 7-9

Fields, waste places, thickets, often in moist soil.

Stem to 3.5 m. tall; often glaucous, sometimes reddish.

Basal rosette of leaves; stem leaves alternate, glabrous or sometimes soft-hairy; variable, but often entire.

LACTUCA FLORIDANA

B 8-10

Low, wet areas.

Robust stems to 20 dm. tall.

Leaves usually pinnate, with segments pointing backwards.

ASTERACEAE

LACTUCA SALIGNA* Willow-leaved Lettuce

Y 7-10

Waste and generally open areas; often in moist soil.

Stem sparsely prickly-bristly below, otherwise glabrous; to 10 dm. tall.

Leaves sometimes arrow-shaped; margins smooth, midribs conspicuously white

Inflorescence narrow, wand-like

Specific epithet and common name both refer to similarity of leaves to those of a willow, but is misleading.

LACTUCA SCARIOLA* Prickly Lettuce

Y 6-10

Fields, waste areas, etc.

Stem often prickly below, otherwise glabrous; to 15 dm. tall.

Leaves commonly twisted at base, to lie in vertical position, sagittate-clasping; prickly toothed on margins and midrib below, otherwise glabrous; usually pinnately-lobed.

Common name for prickly teeth of leaf margins.

LIATRIS

Stems simple.

Leaves alternate, narrow, usually very numerous and becoming smaller, upwards.

Discoid heads in a long, terminal inflorescence; perfect flowers almost always rose-purple.

1 Involucral bracts spreading or recurved

2 Involucral bracts rounded at tip . . . **L. aspera**

2' Involucral bracts pointed

3 Heads few, each with 10-60 florets . . . **L. squarrosa**

3' Heads numerous, each with 5-10 florets . . . **L. pychnostachya**

1' Involucral bracts erect . . . **L. cylindracea**

LIATRIS ASPERA

P 8-11

Dry, open upland areas.

Stem stiffly erect; to 7.2 dm. tall.

Leaves mostly very narrow, but lowest may be 2 cm. broad; glabrous or with short, stiff, roughish hairs.

Inflorescence: stiff spike of many, showy, short-stalked or sessile, rounded heads, each with 25-40 florets.

Involucral bracts often purplish, rounded at tip, recurved, and with margins whitish and often torn.

Specific epithet Lat., "harsh", referring to several parts of plant rough to touch.

LIATRIS CYLINDRACEA

P-V 7-9

Rocky, open woods, bluffs, prairies.

Stems slender, to 7 dm. tall.

Leaves linear, rigid, glabrous, often punctate.

Heads few or even solitary, each with 25-50 florets.

Involucral bracts erect, flat, shiny, sharp-pointed, tightly apressed

Specific epithet Lat., refers to shape of involucre as cylindrical.

LIATRIS PYCNOSTACHYA Button Snakeroot

P-V 7-10

Prairies, rocky open areas.

Stems usually hairy; coarse; to 15 dm. tall.

Leaves numerous, narrow, reduced upwards; crowded, punctate.

Involucral bracts pointed and recurved.

Heads numerous, sessile, crowded on elongate inflorescence, each with only 5-10 florets.

Specific epithet Lat. refers to crowded inflorescence.

P-V 6-9

LIATRIS SQUARROSA

Rocky, dry open glades, prairies, etc.

Stem to 7.5 dm. tall

Leaves rigid, punctate, narrow, those at the base nearly sheathing and very long.

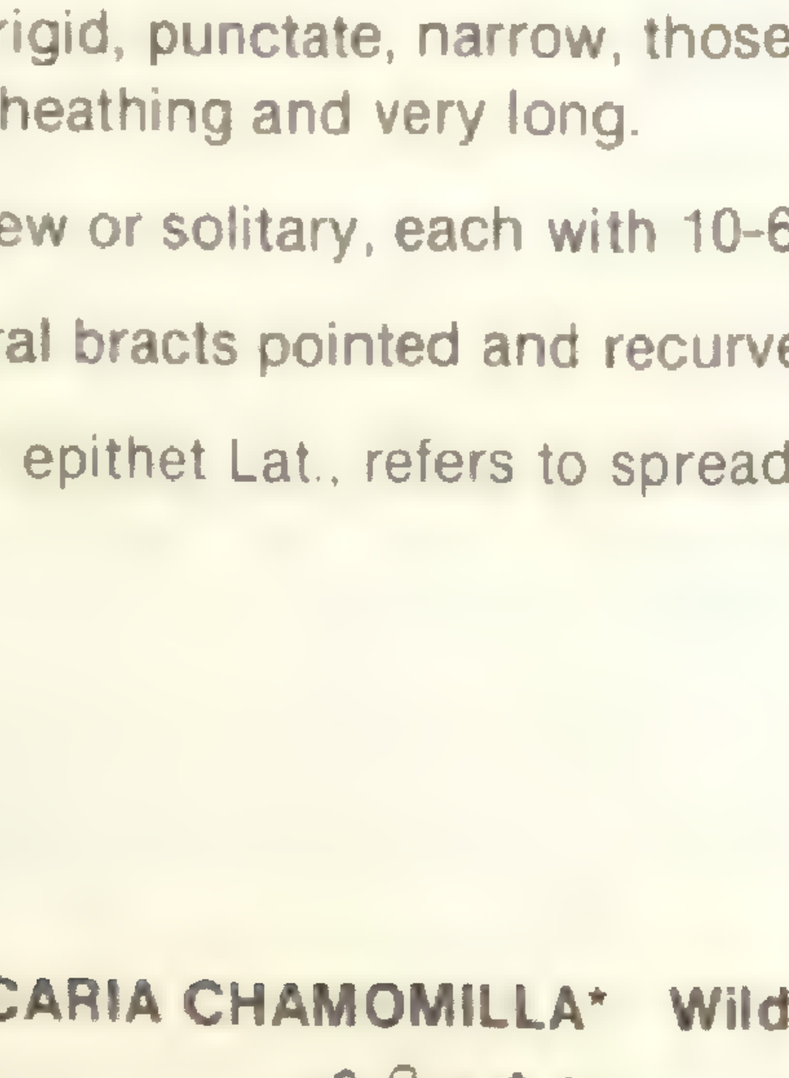
Heads few or solitary, each with 10-60 florets.

Involucral bracts pointed and recurved.

Specific epithet Lat., refers to spreading tips of bracts.

W 5-10

MATRICARIA CHAMOMILLA* Wild Chamomile



Weedy plant of waste areas; aromatic.

Stem branching and glabrous, to 8 dm tall

Leaves very much dissected

Flower heads with 10-20 white rays; disc florets 5-lobed.

Y 5-10

MATRICARIA MATRICARIOIDES Pineapple Weed

Rocky, open ground; this species is native in western North America and has apparently recently spread to Missouri with settlement.

Glabrous plant; stem branching and to 40 cm. tall.

Leaves pinnate, with short, narrow lobes.

Heads discoid, single on leafless peduncles; receptacle conical disc corollas only 4-lobed; involucral bracts with broad, translucent margins

Common name from pineapple odor of bruised plant.

W 4-10

PARTHENIUM HISPIDUM Hairy American Feverfew

Limestone glades, prairies, etc. This species is endemic to Missouri, Arkansas, Kansas, and Texas.

Hairy stem; to 8 dm. tall.

Leaves alternate, the basal petioled; long-haired on lower surface, especially on midveins; upper sessile; often jagged-toothed.

Heads radiate, the 5 rays pistillate and fertile; the white disc florets staminate, with undivided styles; *disk 7-10 mm. wide.*

Generic name Gr., "virgin", referring to fact that only the ray flowers are fertile; common names of this and **P. integrifolium** seem to stem from mistaken identity.

W 4-9

PARTHENIUM INTEGRIFOLIUM Wild Quinine

Rocky open woods and thickets.

Stem usually glabrous below; to 1.2 m. tall.

Basal leaves long-petioled, the upper often sessile and clasping; rough; toothed (despite specific epithet which means that leaf margins are entire).

Heads smaller than in P. hispidum (disk 4-7 mm. wide); otherwise similar.

See notes on **P. hispidum** above for derivation of generic name.

W 5-10

POLYMNIA CANADENSIS

Open or woody limestone areas, usually moist; plants with a heavy odor.

Tall (to 1.5 m.) clammy-hairy plant, especially above.

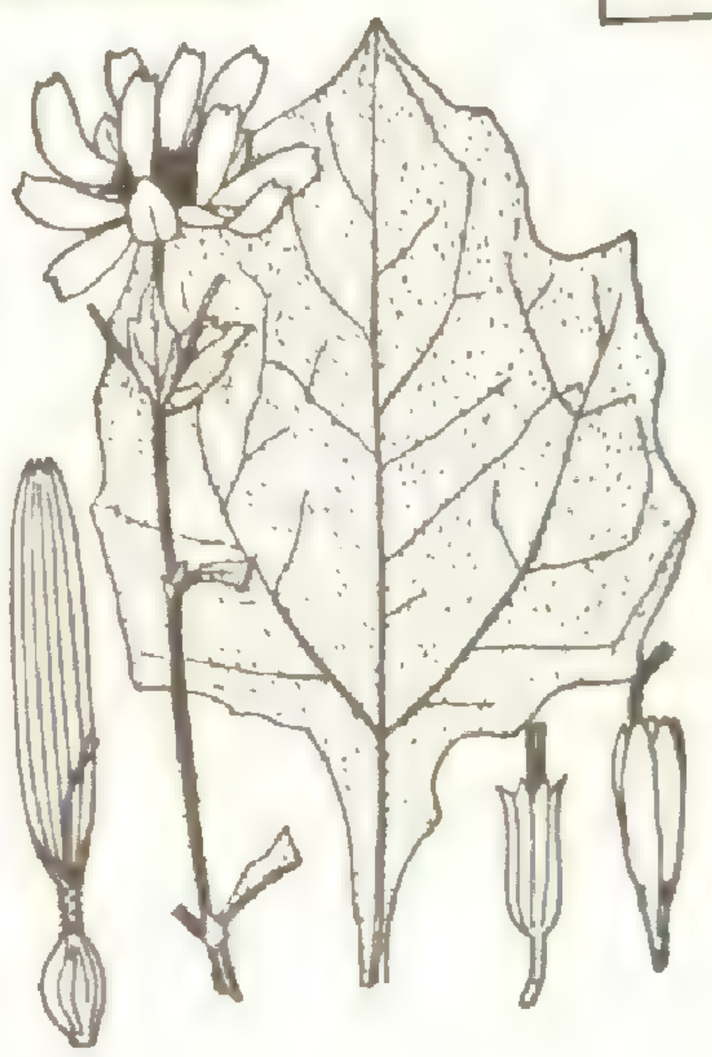
Leaves large, thin, pinnately few-lobed, petioled; at least upper leaves opposite; fragrant when crushed.

Heads small, with 5 pistillate and sometimes 3-lobed rays; disc florets staminate, with sterile, undivided styles; "seeds" thick.

ASTERACEAE

Y 7-9

POLYMNIA UVEDALIA Bear's Foot or Yellow Flowered Leafcup



Low, rich, moist areas; plants with a heavy odor.

Roughish-hairy, stout stem, to 3 m. tall.

Leaves opposite, palmately lobed, the lower ones with hairy, winged petioles.

See **P. canadensis** above, for inflorescence. This species, however, *has more rays (10-15) and they are yellow as well as more conspicuous;* seeds thick.

G-W 7-10

PRENANTHES ALTISSIMA Rattlesnake Root

Rocky or swampy woods, ledges along streams, ravines, etc.

Stem slender, to 2 m. tall.

Leaves all petioled, thin, more or less translucent; variable in shape.

Inflorescence elongate, nodding, *the heads with 5-6 ray florets.*

Generic name Gr., "drooping lower", refers to nodding inflorescence.

W-Y 8-9

PRENANTHES ASPERA

Prairies, limestone glades.

Rough hairy stem to 1.3 m. tall.

Leaves rough-hairy, at least below; somewhat toothed, the lowest petioled, and soon deciduous.

Inflorescence elongate, *with crowded heads, each with 11-14 florets, and barely nodding;* fragrant.

See **P. altissima** above for generic name; specific epithet Lat., "harsh".

PYRRHOPAPPUS CAROLINIANUS False Dandelion

Y 5-10

Variable open habitats.

Glabrous, branching, leafy stem with milky sap; to 9 dm. tall.

Leaves at base similar to those of Dandelion, but decreasing upwards with 3-12 on stem.

Heads solitary or terminal on branches; very similar to Dandelions (all rays); flower heads bloom in early morning, tend to close later.

Generic name Gr. "flame-color" refers to pappus.

RATIBIDA PINNATA Prairie or Gray-head Coneflower

Y 5-9

Dry prairies, edge of woods, etc.

Slender stem grayish-white, grooved, branching, to 1.5 m. tall.

Leaves deeply pinnate, alternate; leaflets usually serrate and slender.

Ray florets (5-10) light yellow and deflexed; neutral, disc grayish (the receptacle is said to have the odor of anise when bruised)

Specific epithet refers to leaves; 1st common name to a typical habitat, second to grayish-white effect of minutely appressed hairs, and to shape of the receptacle.

RUDBECKIA

Coarse, hairy plants.

Leaves alternate.

Receptacle conical or column-like, on usually terminal heads, radiate and showy; rays neutral, generally long, yellow, and often darker at base; disc greenish to purplish black.

1 Lower leaves 3-7 lobed or parted

2 Disc greenish-yellow; stem branches glabrous or sparsely hairy; ray florets drooping . . . **R. laciniata**

2' Disc darker

3 Upper stem densely hairy; leaves thick, downy or densely hairy, at least on lower surface, rays 12-20 . . . **R. subtomentosa**

RUDBECKIA (con't.)

3' Leaves thin, not downy or densely hairy, rays 6-12 . . . **R. triloba**

1' All leaves simple at flowering time

4 No basal leaves at flowering time . . . **R. triloba**

4' Basal leaves present at flowering time

5 Basal leaves sessile or almost so . . . **R. missouriensis**

5' Basal leaves petioled

6 Stigmas long and pointed; hairy, weedy plants of wide distribution . . . **R. hirta**

6' Stigmas blunt and short; plants restricted to wet areas . . . **R. fulgida**

RUDBECKIA FULGIDA

Y 8-10

Occurs on wet ledges, along streams or in meadows of basic soil, made swampy by spring-fed streams.

Stem more or less soft-hairy, to 1 m. tall.

Basal leaves petioled, upper sessile or nearly so; very variable in size and shape.

Involucral bracts sometimes spreading or reflexed; heads several or solitary and usually long-peduncled.

Rays 8-20, to 3 cm. long; disc dark purple or brown.

Specific epithet Lat., "shining perhaps refers to orange bases of rays.

RUDBECKIA HIRTA Black-eyed Susan

Y 5-9

Plants of various habitats

Stem rough, branched, to 1 m. tall.

Leaves alternate, thick, not distinctly toothed, the lower larger and petioled

Long peduncled heads, with 10-20 neutral rays: few, and in terminal clusters

Specific epithet Lat., "rough" refers to stiffish hairiness of whole plant.

RUDBECKIA LACINIATA Wild Goldenglow or Cut-leaf or Green-headed Sunflower

Y 7-9

Low wet areas.

Stem smooth, whitish, much branched, to 3 m. tall.

Petioled leaves deeply cut into 3-5 lobes.

Long peduncled heads numerous, with 6-10 golden, reflexed rays.

"Cut-leaf" refers to same characteristic as specific epithet; the 3rd common name to color of disc.

RUDBECKIA MISSOURIENSIS

Y 6-10

Limestone glades, or other open areas.

This plant, endemic to Illinois, Missouri, Arkansas, Oklahoma and Texas, is usually found growing in large colonies.

Long-hairy, leafy stem usually branched; to 8 dm. tall.

Leaves entire, narrower than those of the similar **R. hirta**: conspicuously long-hairy, numerous petioled, essentially uniform.

RUDBECKIA SUBTOMENTOSA Sweet Cone-flower

Y 7-10

Prairies, low areas of various sorts.

Stem branched above; densely short-hairy below; to 1.5 m. tall.

Leaves serrate, petiolate and downy on lower surface; at least the lower 3-cleft.

Heads with 12-20 rays; the disc dark.

Common name for its anise scent.

RUDBECKIA TRILOBA Thin-leaved Coneflower or Brown-eyed Susan

Y 6-11

Low, wet areas

Leaves thin, long-hairy on lower surface; the upper leaves only coarsely toothed or entire; not bristly.

Heads several to numerous, relatively small (about 3 cm. across) on spreading branches; 6-12 rays; disc dark purplish.

Specific epithet is misleading as lower, trilobed leaves are usually dried up by flowering time.

SENECIO

All spring or early summer flowering in our area.

Leaves alternate or all basal.

Plants with many-flowered, radiate heads, the rays pistillate.

Name Lat., "old man" for white-hairiness of some spp., or for the white-hairy pappus.

1 No leafy tufts at base of stem; leaves deeply pinnate, about equally distributed along stem, and about equal from base to tip . . . **S. glabellus**

1' Leafy tufts at base of stem; stem leaves much larger at base, fewer and reduced in size upwards

2 Lower surface of basal leaves and/or top of stem, and/or leaf petioles and/or pedicels of flower heads short-hairy . . . **S. plattensis**

2' All of above parts usually glabrous

3 Basal leaves not tapering to petiole; fragrant . . . **S. aureus**

SENECIO AUREUS Golden Ragwort or Squaw Weed

Y 4-6

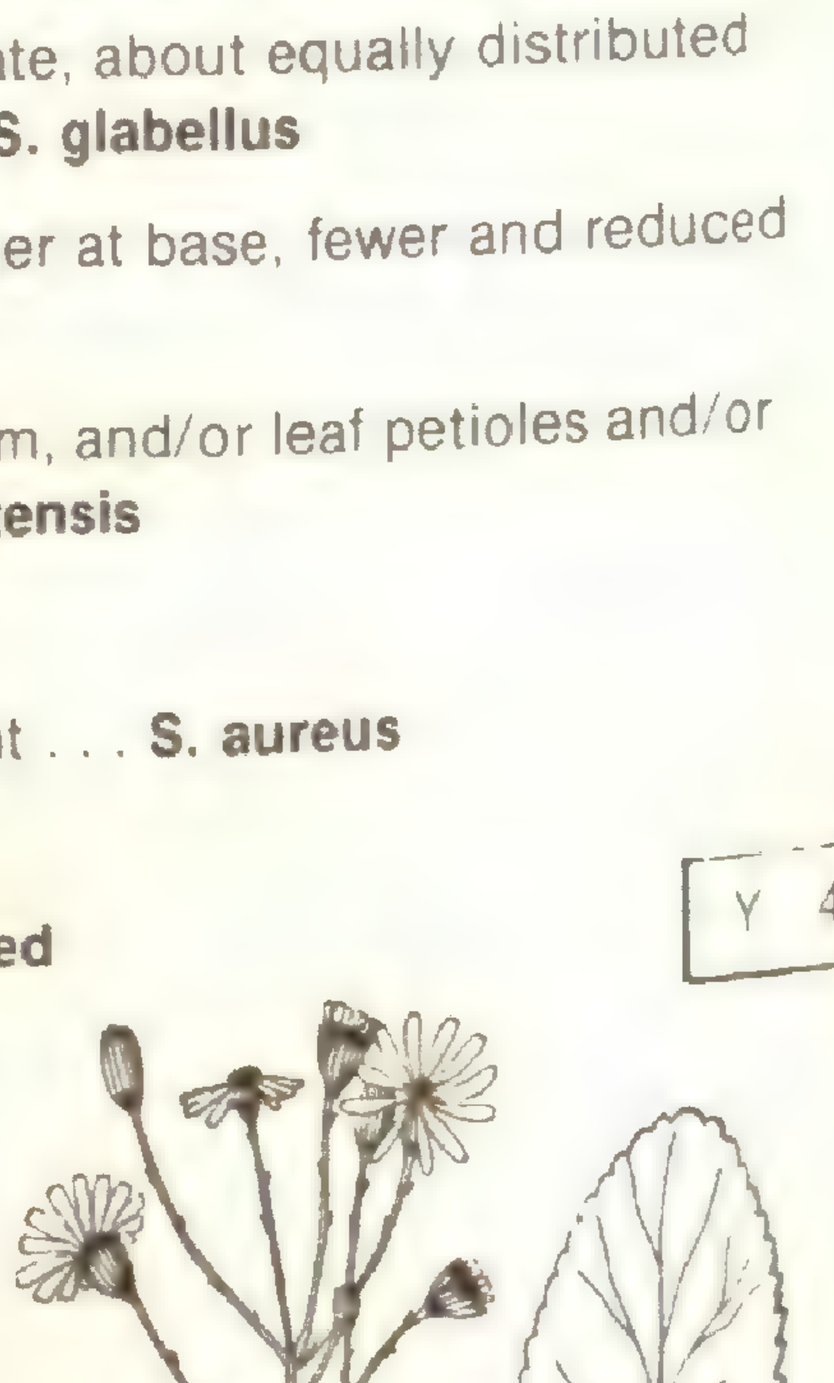
Moist, low areas.

Stem branching above; usually glabrous to 8 dm. tall.

Basal leaves long petioled, often cordate at base; serrate; stem leaves much smaller, more or less pinnately divided.

Usually several heads on slender peduncles; involucral bracts often purple-tipped; 8-12 golden-yellow rays.

Second common name from use by certain American Indians in reducing difficulties of childbirth.



SENECIO GLABELLUS Butter Weed

Y 4-6

Found only in low, wet ground, such as flood plains; often covering large areas.

Stems succulent, hollow, erect, glabrous, soft; to 1 m. tall.

Usually no basal leaves; lower leaves petioled, with more or less fan-shaped, notched lateral divisions, the terminal rounder and much larger.

Flower heads clustered, showy.

Specific epithey Lat., "almost smooth", common name refers to color.

SENECIO OBOVATUS Squaw Weed or Round Leaf Groundsel

Y 3-6

Plant of low, open areas, reproducing by elongate stolons.

Flowering stem slender, weak, and usually glabrous; to 40 or more cm. tall.

Basal leaves with winged petioles, roundish and blunt; upper leaves sessile, alternate, pinnately lobed, often with tufts of hairs in axils; involucre purplish

Ray and disc florets both bright yellow; 10-15 rays; heads on elongate, slender pedicels.

SENECIO PLATTENSIS Prairie Ragwort

Y 4-6

Dry, upland, open areas.

1 to several stems to 4 dm. tall; hairy, as are all parts.

Basal and lower leaves unlobed, petioled (usually).

ASTERACEAE

SILPHIUM

Tall, coarse plants usually with resinous sap.

Grouped heads with many florets, with yellow, numerous, pistillate rays; disk florets staminate with sterile, undivided styles.

Seeds flat, winged, notched at top.

1 Leaves deeply lobed and extending well up stem . . . **S. laciniatum**

1' Leaves not lobed or cut

2 Leaves all basal, or nearly so; very large . . . **S. terebinthinaceum**

2' Stems leafy from base to top, the leaves mostly of equal size

3 Stems 4-angled; leaves joined around them . . . **S. perfoliatum**

3' Stems round in x-section, or nearly so; leaves not joined around them . . . **S. integrifolium**

SILPHIUM INTEGRIFOLIUM Rosin Weed

Y 7-9

Rocky, dry, open areas (this is essentially a western, prairie species).

Stem often glabrous above; sometimes hairy, sometimes also glaucous; to 15 dm. tall.

Leaves large, coarse, sessile, mostly opposite; scabrous on both sides.

Heads several, in short inflorescence; the disc to 25 mm. wide, the rays 15-35.

Common name for its resinous sap; specific epithet Lat., "entire leaved", sometimes misleading.

SILPHIUM LACINIATUM Compass Plant

Y 7-9

Prairies, glades, etc.

Stems stout, leafy, to 3.5 m. tall.

Large leaves alternate, deeply incised, reduced upwards; petioled, and these clasping at base.

Specific epithet Lat., "slashed", for lobing of leaves; common name refers to strange fact that leaves are usually oriented on a north-south axis.

SILPHIUM PERFOLIATUM Cup Rosin Weed

Y 7-9

Low, wet, open areas.

Stems smooth, 4-angled, branching above, to 2.5 m. tall.

Upper leaves cupped around stem; coarsely toothed, large; lower leaves joined by their winged petioles.

Heads at tops of branches, the disc to 2.5 cm. wide; 20-30 pale yellow rays.

Specific epithet accurately describes the leaves.

SILPHIUM TEREBINTHINACEUM Prairie Dock

Y 7-10

Limestone prairies or glades.

Stem leafless or nearly so; smooth; to 3 m. tall.

Very large, cordate, basal leaves on relatively slender petioles; sharply toothed.

Heads several to many in open inflorescence; large, the disk to 2.5 cm. wide, and with 12-20 rays.

Specific epithet refers to the resin as "like turpentine."

SOLIDAGO Goldenrod

Most species have wand-like stems, and sessile stem leaves.

Heads mostly with both ray and disc florets, but so small that this is not readily seen.

Heads are arranged in inflorescences that help in identification (see below) . . . but this is a difficult matter as closely alike species tend to hybridize rather freely.

The following key may help in recognizing some of the more common species of our area:

1 Inflorescence more or less flat-topped . . . **S. rigida**

1' **Inflorescence not flat-topped**

2 Heads scattered along sides of stem, and arising from leaf axils

SOLIDAGO Goldenrod (con't.)

3 Lower leaves much larger than middle and upper ones; leaves and stems noticeably long-hairy . . . **S. hispida**

3' Stem leaves nearly like in size, or gradually decreasing upwards; leaves and stems with short hairs, or a few long ones . . . **S. petiolaris**

2' Inflorescence of heads on 1-sided racemes

4 Racemes clustered into more or less of a pyramid; leaves with 3 prominent veins and stems erect

5 Pyramidal, cluster rather loose; leaves few-toothed or entire; stem hairy . . . **S. altissima**

5' Pyramidal cluster rather tight; the leaves regularly and sharply serrate; stem smooth . . . **S. gigantea**

4' Racemes loosely spreading, recurved; if leaves with 3 prominent veins. then plant reclining, spreading, not stiffly erect

6 At least lower leaves 3-veined; hairy, sharply serrate; short petioled . . . **S. drummondii**

6' Leaves with 1 principal vein

7 Whole plant gray-hairy, the leaves inconspicuously toothed (if at all) . . . **S. nemoralis**

7' Plants not gray-hairy, leaves definitely toothed

8 Plant of dry areas with leaves abruptly tapering to base; heads with 3-5 rays . . . **S. ulmifolia**

8' Plants of moist areas, with leaves gradually tapering or rounded at base; heads with 6-9 rays . . . **S. rugosa**

Y 8-11

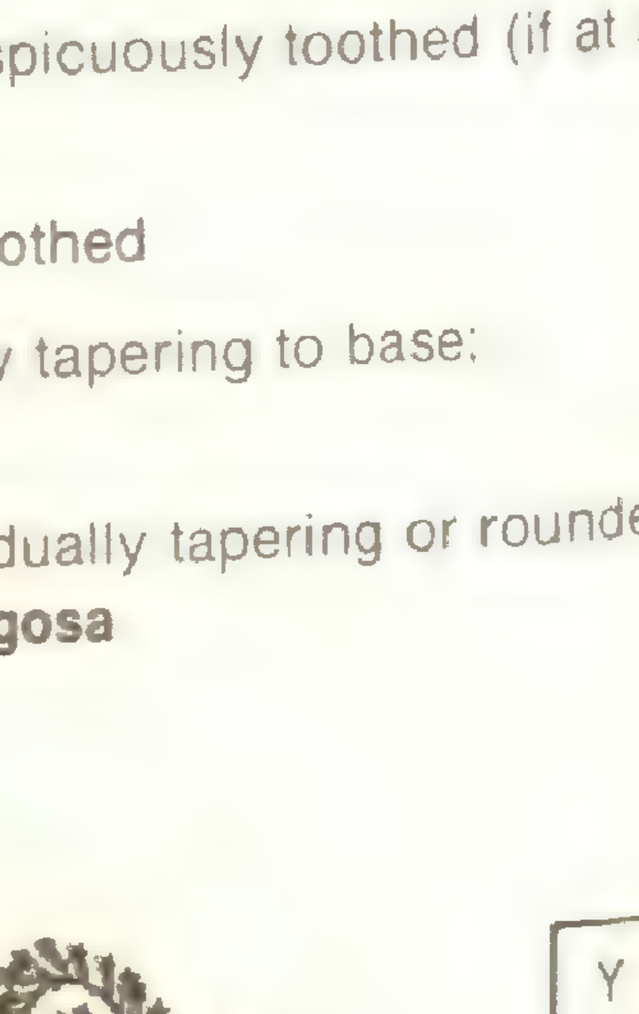
SOLIDAGO ALTISSIMA Tall Goldenrod

Common plant of open areas, where it often becomes dominant species; particularly subject to insect galls.

Stem hairy, grayish; to 2 m. tall.

Leaves 3-veined, hairy below, rough above; crowded; few-toothed or entire.

Inflorescence: a loose pyramid of 1-sided racemes.



SOLIDAGO DRUMMONDII

Y 9-11

Ledges and crevices of usually limestone bluffs, etc.

Stem with short, soft hairs; to 9 dm. tall.

Basal leaves, at least, 3-veined, toothed, not much larger than those above, but dried up by flowering time; all leaves short-petioled (except sometimes the uppermost) and finely short, soft-hairy; at least on lower surface.

Inflorescence spreading, recurved; 3-7 rays per head.

SOLIDAGO GIGANTEA

Y 7-10

Low, wet areas.

Stoutish stems commonly clustered, glabrous or nearly so; to 2.5 m. tall.

Leaves numerous, essentially 3-veined, sharply serrate; the lower stem leaves soon deciduous; only gradually or scarcely reduced upwards.

Inflorescence: closely placed, recurving 1-sided racemes; 10-17 rays (more numerous than disc florets) per head.

SOLIDAGO HISPIDA

Y 7-10

Rocky, open areas, usually in acid soils.

Stem conspicuously hairy, to 10 dm. tall.

Lower leaves much larger than those above; conspicuously hairy; petioled.

Inflorescence long, cylindrical, the heads arranged spirally; rays 10-14 per head.

ASTERACEAE

SOLIDAGO NEMORALIS Old Field or Gray Goldenrod

Y 6-11

Dry, open areas.

Stem so hairy as to appear gray;
to 13 dm. tall.

Basal leaves much larger than others, persistent;
mostly entire; 1 principal vein.

Inflorescence: 1-sided racemes with arched to
recurved branches, and crowded heads;
rays 5-9 per head.

SOLIDAGO PETIOLARIS

Y 5-11

Dry, rocky, open areas, usually in acid soil.

Stem glabrous below, hairy above;
strictly erect; to 1.5 m. tall.

Leaves thickish, entire or somewhat toothed,
short-hairy on upper surface; margins minutely
hairy with short, soft-hairy petioles.

Inflorescence: heads clustered in upper leaf axils;
long and narrow; about 5-8 ray florets,
unusually showy in this genus.

Specific epithet refers to petioles, and is misleading.

SOLIDAGO RIGIDA Stiff Goldenrod

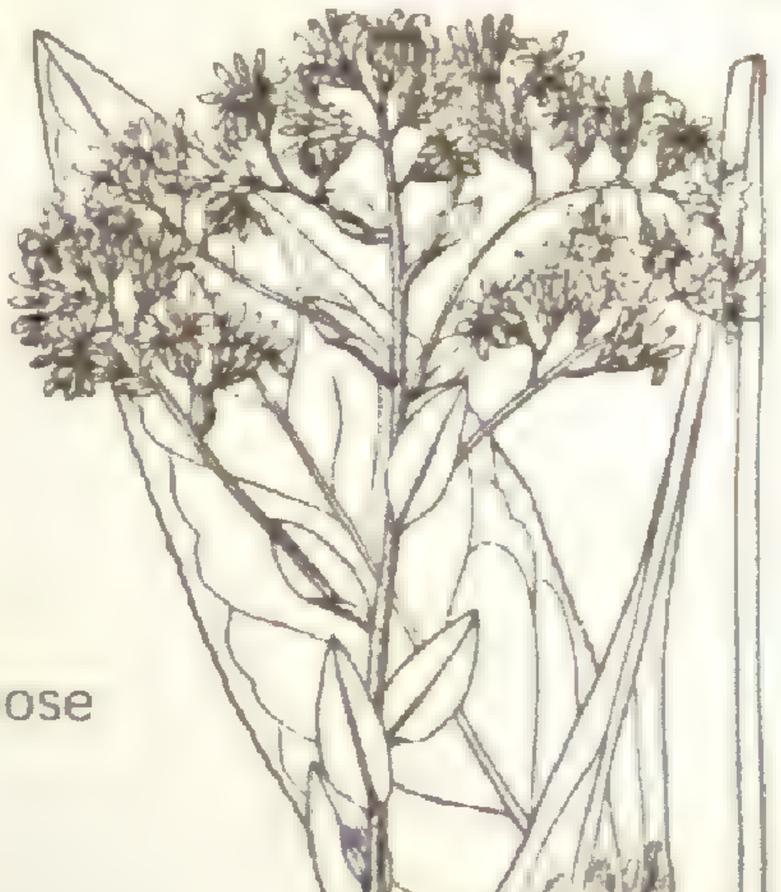
Y 8-10

Prairies; dry open areas.

Coarse stem densely short-hairy; to 15 dm. tall.

Leaves firm, not markedly toothed;
lower stem leaves long-petioled; smaller, and
shorter petioled upwards; bluish green and
stiff-hairy

Inflorescence: heads relatively large with
many-florets, each with 8-14 longish rays; corymbose
and very hairy.



SOLIDAGO RUGOSA Rough-leaved Goldenrod

Y 8-10

Wet, open areas.

Stems very leafy, spreading-hairy, to 15 m. or more tall.

Lower leaves little if at all larger than upper; soon deciduous; not 1-veined; rugose or loosely veined below, toothed, nearly sessile.

Inflorescence with recurved branches, these with many leafy bracts; rays slender and short, 2-6 per head.

Specific epithet Lat., "wrinkled" refers to leaves.

SOLIDAGO ULMIFOLIA Elm-leaf Goldenrod

Y 7-11

Dry areas.

Stem glabrous below inflorescence; to 1.5 m. tall.

Leaves thin, often jagged or coarsely and unequally serrate; long-hairy on lower surface, especially along veins, with 1 principal vein; lower leaves broadly petioled, but usually deciduous by flowering time.

Inflorescence with strongly recurved branches, and crowded heads; each with 3-5 minute rays.

Specific epithet Lat., refers to leaves as elm-like.

SONCHUS ASPER Spiny-leaved Sow Thistle

Y 5-10

Weed of wide variety of waste areas.

Glabrous plant with milky sap, to 1 m. tall.

Leaves usually unlobed (sometimes almost pinnate) with *very bristly margins, and clasping stem with rounded bases.*

Several heads of 85-250 ray florets, each head to 2.5 cm. wide.

Specific epithet Lat., "rough".

ASTERACEAE

SONCHUS OLERACEUS* Common Sow Thistle

Y 6-10

Weed of wide variety of waste areas.

Glabrous plant with milky sap; to 1 m. tall.

Leaves pinnately divided toward base, less so upwards; *margins with weak prickles or sometimes none; clasping stem with pointed bases.*

Several heads of 85-250 ray florets, each head to 2.5 cm. wide.

Specific epithet Lat., "fit to be a vegetable", although the English herbalist, John Parkinson, said of them, in 1640 "They are usually eaten as salat herbes . . . by those beyond the seas . . .", inferring that foreign tastes are odd indeed.

TARAXACUM OFFICINALE* Dandelion

Y 1-12

Lawns, gardens, fields, meadows, almost any open area.

Leaves all in basal rosette; coarsely and variously pinnately cut; usually narrowed to scarcely winged petiole

Solitary head of all ray florets on naked, milky-sapped flower stalk; florets perfect, but the pollen infertile.

Common name is mispronunciation of Fr., "dent de lion", lion's tooth, referring to shape of leaves; specific epithet Lat., "of the shops", refers to its ancient medicinal fame.

TRAGOPOGON DUBIUS Goat's Beard

Y 4-10

Fields, meadows and other open areas.

Stem stout, glabrous, to 1 m. tall.

Flowering stalk upwardly enlarged, below the head.

Leaves alternate, entire, clasping, commonly grasslike.

Solitary heads of all *yellow ray florets* perfect; involucral bracts narrow, long conspicuous; heads close at noon.

Specific name probably based on fact that this species was once confused with the similar, but much rarer **T. pratensis.**

TRAGOPOGON PORRIFOLIUS Salsify or Oyster Plant

B-V 5-7

Roadsides, fields, etc.

Stem to 1 m. tall, glabrous, enlarged below the inflorescence.

Leaves alternate, entire, clasping, more or less grass-like.

Heads of *purple, perfect ray florets:* solitary.

The 1st common name may derive from French "salsifis", meaning the same as Latin saxifraga" as this plant is supposed to resemble one (or another of the Saxifrages, which see; the 2nd common name refers to oyster-like taste of the root and leaves, used as a vegetable; specific epithet refers to the leaves which supposedly resemble those of leeks **(Allium porrum).**

VERBESINA Crown-beard

Radiate flower heads usually on winged stems, usually with alternate leaves.

1 Rays white . . . **V. virginica**

1' Rays yellow

2 Rays 2-8 drooping; involucral bracts few, soon deflexed; leaves tapering to base and mostly decurrent . . . **V. alternifolia**

2' Rays 8-15, spreading; bracts numerous, not deflexed; leaves sessile . . . **V. helianthoides**

VERBESINA ALTERNIFOLIA Yellow Ironweed or Wing-stem

Y 8-10

Rich, low, wet soils.

Tall, branching stem; coarse; winged, at least above; to 2 m. tall.

Leaves serrate, with pinnate venation; alternate and usually rough.

Ray florets 2-8, neutral, drooping, often differing in size.

(NOTE: this species is listed in both Gray and Peterson as **Actinomeris alternifolia,** the generic name deriving from Greek, and referring to the irregular size of the rays).

VERBESINA HELIANTHOIDES Sunflower Crown-beard

Y 5-10

Dry, open areas.

Stem strongly winged, rough-hairy, to 1 m. tall

Leaves alternate, sessile, serrate; rough on upper, pubescent on lower, surface.

Heads relatively large (to 16 mm. wide) 8-15 rays, usually sterile; spreading.

VERBESINA VIRGINICA White Crown-beard or Frostweed

W 8-10

Rocky open woods, along streams, in thickets.

Stem narrowly winged below; to 2 m. tall; soft-hairy.

Leaves also soft-hairy, on lower surface; alternate; pinnately veined; usually with winged petioles.

Heads numerous, small, crowded, 20-100 or more in flat-topped inflorescence; each with 3-4 white, pistillate rays.

1st common name refers to resemblance of fruits to arachnids, the 2nd to the fact that this plant (like dittany or **Cunila** in the Lamiaceae) forms ice curls in late autumn.

VERNONIA Ironweed

Tall, leafy stemmed plants.

Leaves alternate, sharp-pointed, serrate.

Heads of perfect disc florets in a flat-topped or open inflorescence; purple.

1 Involucral bracts prolonged into thread-like tips; heads large, with 55-115 florets . . . **V. crinita**

1' Involucral bracts blunt or merely pointed; lower surface of leaves hairy; heads usually with less than 55 florets

2 Involucral bracts long-pointed and often recurved, usually with a prominent midrib . . . **V. baldwinii**

2' Involucral bracts blunt, or with minute pointed tip; none recurved; midrib not prominent

VERNONIA Ironweed (con't.)

3 Lower surface of leaves with long, crooked hairs; heads with 35-60 florets . . . **V. missurica**

3' Lower surface of leaves with short, straight hairs, usually denser on midrib; heads with less than 30 florets . . . **V. altissima**

VERNONIA ALTISSIMA Ironweed

P-V 8-10

Low damp ground, in rich soil.

Stems glabrous or nearly so; to 3 m. tall.

Leaves thin, long-pointed; glabrous or nearly so above, minutely hairy below.

Inflorescence loose and open; heads numerous; both the involucre and pappus usually purple.

Specific epithet Lat., "very tall".

VERNONIA BALDWINII

P-V 5-10

Open areas, roadsides, etc.; our most common species.

Stems to 15 dm. tall; somewhat hairy.

Leaves pointed, serrate, hairy on both surfaces.

Long-pointed bracts of involucre recurved; heads commonly very numerous and with 18-34 florets.

VERNONIA CRINITA

P-V 7-10

Wet, rocky areas; open woods, gravel bars, etc.; endemic to Ozark region.

Leafy stems, commonly glabrous and somewhat glaucous; to 3 m. tall.

Leaves long, narrow; typically glabrous.

Inflorescence open, with large 55-many florets in a head; involucral bracts very prolonged.

Specific epithet Lat., "long-hairy" applies to tips of involucral bracts.

ASTERACEAE - BALSAMINACEAE

P-V 7-10

VERNONIA MISSURICA

Moist, open prairies or wastelands.

Stout stem to 1.5 m. tall, somewhat hairy.

Lower surface of leaves with long, crooked hairs, at least on veins.

Inflorescence widely branched; involucral bracts tight; purple or greenish along the midvein; heads with 35-60 florets.

G 8-10

XANTHIUM Cocklebur

3-4 species in our area, all coarse, weedy annuals, with branching or simple stems; Steyermark lists 5 native, 3 introduced species in Missouri

Leaves alternate, petioled; toothed or lobed.

Monoecious plants, with pistillate heads clustered below, staminate in short spikes or racemes above; involucre of former with hooked bristles, the "bur" on which species identification is usually based.

Florets all disc, greenish and insignificant.

BALSAMINACEAE Touch-Me-Not Family

Herbs with transparent, watery stems.

Leaves simple, without stipules.

Flowers bilaterally symmetrical, bisexual, with superior ovaries; sepals petaloid,, the one at back of the flower large and spurred; stamens joined over the pistil.

Family name based on same root as "balm", related to Hebrew word for healing ointment. Local members of the Balsaminaceae are used both to prevent and soothe poison ivy and other skin irritations.

IMPATIENS Impatience, Touch-me-not or Jewel Weed

First and second common names refer to capsular fruits that burst on contact; third to appearance of leaves when held under water, similar to mercury in silvery color.

IMPATIENS CAPENSIS

O 4-10

Wet areas, sometimes in quite acid soil.

Leaves alternate, scallop-edged; upper surface dull or dark green; petioled.

Spurred sepal recurved, often touching *orange spotted floral tube.*

Specific epithet reflects error in source of plant: **capensis** Lat., "of the cape", referring to Cape of Good Hope, although this species is a native American.

IMPATIENS PALLIDA Pale touch-me-not

Y 5-10

Wet areas, often in shade, and in limestone soils.

Leaves alternate, scallop edged; petioled; upper surface glaucous.

Spurred sepal merely deflexed; *floral tube yellow.*

BERBERIDACEAE Barberry Family

Leaves deeply lobed or divided.

Flowers with 4-6 sepals, 6-9 petals with as many, or twice as many, stamens.

Pistil single, with style absent or very short, stigma usually massive, lobed.

CAULOPHYLLUM THALICTROIDES Blue Cohosh

Y-G 3-5

Rich, moist soil, usually on north-facing slopes; uncommon in our area.

Whole plant grayish-green and glaucous; to 7.5 m. tall.

Leaves compound, with many leaflets, from mid-stem.

Inflorescence terminal, on stalk with single leaf (not fully developed at flowering time), and single much smaller leaf just below; terminal.

Flowers with rudimentary petals and 6 much larger sepals.

Generic name Gr., "stem leaf" for obvious reasons; specific epithet infers that plant resembles **Thalictrum,** which see; common name from color of fleshy, poisonous seeds.

PODOPHYLLUM PELTATUM May Apple

W 4-5

Usually in colonies, in low moist woods, but also found in dry, open woods.

Stem-like, smooth petioles of basal leaves to 4 dm. tall.

Leaves palmately compound, with petioles attached near center.

Flowers regular, solitary, nodding on stout peduncle, from fork between 2 leaves (plants with single leaf are sterile)

Generic name Gr., "foot-leaf" probably refers to fact that all leaves are essentially basal; specific epithet to attachment of petiole; common name to fruit, which does not ripen, however until July

BETULACEAE Birch Family

(Steyermark uses the name **Corylaceae** for this family)

Trees or shrubs; usually monoecious.

Leaves alternate, simple, stipulate, serrate.

Staminate flowers in pendulous catkins; pistillate in smaller, catkin-like spikes that are not always pendulous, and with 2 styles.

1 Lower leaf surface whitish, bark peeling off in reddish-brown, papery strips, exposing pale, smooth layer . . . **Betula**

BETULACEAE Birch Family (con't.)

1' Lower surface of leaves greenish; bark not peeling

2 Leaf blades with blunt or rounded tip and rounded teeth . . . **Alnus**

2' Leaf blades with pointed tips or teeth or both

3 Leaf blade usually with 5-8 veins on each side of mid-vein . . . **Corylus**

3' Leaf blades usually with 9-15 veins on each side of mid-vein

4 Bark smooth, twisty, blue-gray; lower surface of mature leaves glabrous except for hairy tufts in axils of veins; none of lower, large lateral veins forked . . . **Carpinus**

4' Bark scaly, shredding in narrow strips, light brown to brownish-gray; lower surface of mature leaves mostly hairy, some of lower lateral veins forked . . . **Ostrya**

ALNUS SERRULATA Common or Smooth Alder

Y 2-4

Wet, often acid soils, characteristically swampy or near a spring.

Large shrub or small tree; trunks "fluted", the bark smooth, gray and aromatic; to 5 m. tall.

Leaves alternate, simple, blunt or round tipped; leathery; fine toothed.

Catkins of both sexes formed in previous summer; male becomes conspicuous during the winter, and both open in early spring, before tree leafs out; staminate catkin long and colorful (yellow-brown), pistillate short, reddish.

BETULA NIGRA River or Red Birch

P-Y 4-5

Wet areas along streams, or on borders of gravel beds, bottomlands.

Shaggy tree with bark that peels off in thin, layered strips; to 30 m tall

Alternate leaves firm, irregularly toothed; whitish on lower surface; with hairy petioles.

Pistillate catkin erect, hairy, thick-cylindric, the flowers without calyx; 2-3 to each 3-lobed bract, bracts thin and soon deciduous; staminate catkin becomes pendulous when it enlarges to 5-8 cm. long, during early spring.

1st common name from common habitat, where this tree plays important role in preventing erosion; 2nd from color of bark that peels off.

BETULACEAE

CARPINUS CAROLINIANA Muscle Tree, Blue Beech or Hornbeam

Y-P 4-5

Understory tree of wet areas, especially on north-facing slopes.

Bushy, and twigs zig-zag; bark smooth, blue or ashy gray; tree trunk fluted, branches spreading into flattened spray.

Leaves pointed, doubly-toothed, alternate.

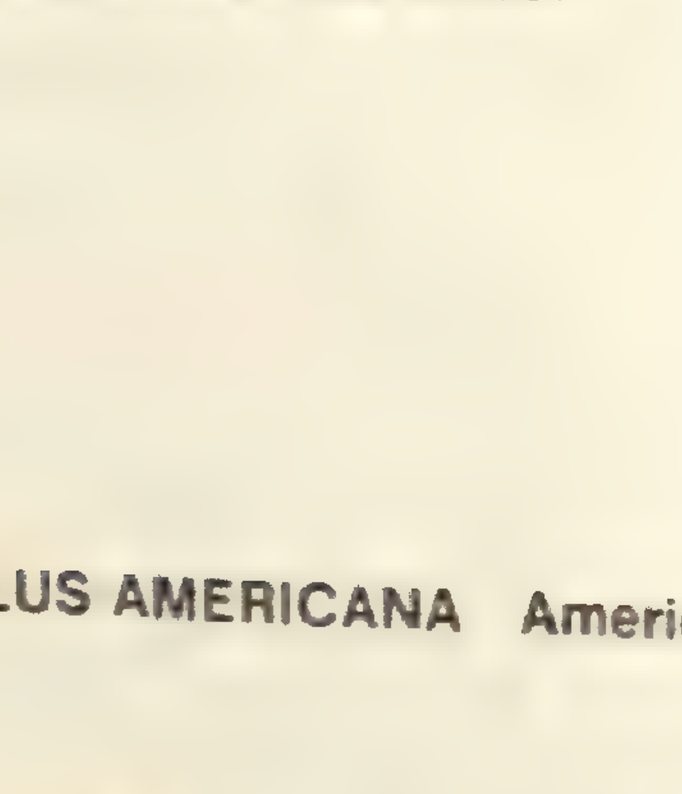
Both staminate and pistillate catkins ultimately pendulous, the individual male flowers consisting only of several stamens in the axil of each bract; female flowers 2, in the axil of single, flat, leafy, soon deciduous bract, at tips of young, leafy shoots.

1st common name refers to sinewy look of trunk; 2nd to similarity of bark, slender buds and straight-veined leaves to breech (not in our area), 3rd to hardness of the wood.

CORYLUS AMERICANA American Hazelnut

Pistillate flowers R 2-4

Staminate flowers Y 2-4



Thickets or woodland borders

Shrubby plant with hairy twigs; to 3 m tall

Leaves alternate, simple, serrate, pointed pale and hairy on lower surface; petioled, these hairy, and red when leaves are young

Staminate inflorescence a catkin, - conspicuous in bud all winter; pistillate with flowers in small clusters, with red stigmas protruding from buds near tips of twigs

Generic name Gr., "helmet", refers to shape of bracts enclosing fruit

G-Y 3-5

OSTRYA VIRGINIANA Hop Hornbeam or Ironwood

Rocky slopes, borders of upland woods, etc., usually in dry soil.

Small tree, to 10 m. tall; branches slender, twigs zig-zag; bark of mature trees rough and flaky.

Leaves simple, alternate, twice serrate, hairy on petioles and lower surface.

Staminate inflorescence 1-3 catkins at tips of last year's twigs, slender and pendulous; pistillate at tip of new, leafy shoots, erect, each flower enclosed in bladdery, unlobed and eventually densely hairy involucre.

"Hornbeam" and "ironwood" due to hardness of wood; "hop" refers to fact that fruit resembles that of the botanically unrelated "Hop" plant, **Humulus lupulus** (Urticaceae or Cannabaceae)

BIGNONIACEAE Trumpet Creeper Family

A family of mostly woody plants of the tropics; often climbing vines.

Leaves opposite, without stipules, and usually compound (although not so in **Catalpa** trees, not herein described, but commonly planted in our area).

Flowers perfect, irregular and showy; hypogynous with a long style and two-parted stigma; tubular calyx 5-lobed and often leathery; corolla bell- or funnel-shaped, 5-lobed and 2-lipped; stamens in 2 pairs, with a 5th infertile; style long, terminated by a 2-parted stigma.

O 5-10

CAMPSIS RADICANS Trumpet Creeper Vine, Devil's Shoe-laces, Hell Vine

Roadsides, fence-rows, stream banks, open woods, thickets.

Leaves with 7-11 egg-shaped leaflets, coarsely and sharply toothed.

Flowers in terminal clusters; floral tube 7 cm. long.

Generic name Gr., "curving" refers to in-curving stamens; specific epithet Lat., "rooting", to aerial roots, by means of which plant climbs; first 2 common names, to shape of large, showy flower; 2nd to interlacing, trailing, sprawling stems which make this plant a hellish sort of weed to walk through or to eradicate.

BORAGINACEAE Borage Family

Plants usually rough-hairy.

Leaves usually alternate, simple, entire or shallow-lobed; without stipules.

Inflorescence one-sided, uncoiling as flowers open.

Flowers regular, perfect, with 5 joined sepals, 5-parted corolla; 5 stamens and 4-parted ovary with single style and 1 or 2 stigmas.

1 Plants smooth . . . **Mertensia**

1' Plants more or less hairy

2 Flowers white or whitish

3 Leaves sessile

4 Low plants, not over 4 dm. tall; calyx irregular

5 Solitary flowers with conspicuous corollas, at end of short branches . . . **Heliotropium tenellum**

5' Flowers in long, terminal inflorescence, the corollas inconspicuous . . . **Myosotis**

4' Plants to 1 m. tall, the calyces regular

6 Leaves narrow, with single main vein . . . **Lithospermum arvense**

6' Leaves broader, strongly veined . . . **Onosmodium**

3' Leaves petioled . . . **Heliotropium indicum**

2' Flowers not white

7 Flowers blue

8 Leaves all sessile; plant very bristly . . . **Echium vulgare**

8' Upper leaves clasping, lower decurrent on long petioles . . . **Cynoglossum virginiana**

7' Flowers reddish, yellow or orange

9 Flowers reddish . . . **Cynoglossum officinale**

9' Flowers yellow or orange

10 Flowers yellow, the corolla lobes fringed . . . **Lithospermum incisum**

10' Flowers orange, the corolla lobes entire . . . **Lithospermum canescens**

CYNOGLOSSUM OFFICINALE Beggar's Lice or Common Hound's Tongue

P-R 5-7

Roadsides, fields, and rocky waste ground; plant has a mousey odor.

Branched stem erect and pubescent, leafy to the top, to 9 dm. tall.

Basal and lower stem leaves usually oblong, pubescent, and up to 3 cm. long with slender petioles; upper stem leaves sessile, the uppermost clasping.

Racemes several or numerous and simple or branched; pedicels 6-12 mm. long.

Corolla reddish-purple or rarely white; about 8 mm. broad.

CYNOGLOSSUM VIRGINIANUM Wild Comfrey or Giant Forget-me-not

W 4-6

Showy woodland plant of rich woods, etc.

Unbranched stem to 8 dm. tall.

Leaves 2-10, widely separated, the lower petioled, the upper clasping; very large and hairy.

Bluish-white flowers pedicelled, on elongate racemes; calyx deeply perted; stamens not longer than corolla tube; style slender with unbranched stigma.

Generic name: see above.

ECHIUM VULGARE* Blue-weed, Blue Devil
Blue-thistle, Viper's Bugloss

B 5-9

Rocky, open waste areas.

Stem and leaves covered with bristly hairs; to 8 dm. tall.

Leaves progressively smaller from base, the uppermost merely bract-like; sessile.

Numerous inflorescences, in axils of upper leaves; flowers sessile, crowded, their red stamens showing; buds pink, older flowers turn purple.

Generic name and last common name refer to presumed resemblance of seed to head of a viper, this implying, according to the Doctrine of Signatures, that the plant was useful in the treatment of snakebites; "bugloss" refers to leaves, via Greek describing them as

ECHIUM VULGARE* Blue-weed, Blue devil (con't.)

similar to ox tongues. Other common names refer to this loosely flowered plant as, in truth, a devilish weed.

HELIOTROPIUM

Leaves entire.

Flowers small, their stamens not showing; style single, with 1 stigma.

Generic name infers, incorrectly, that plant turns toward sun.

HELIOTROPIUM INDICUM

B 7-11

Low, wet areas.

Erect, branched, *sparsely hairy stem,* to 8 dm. tall.

Leaves on margined petioles; *hairy and wrinkled.*

Inflorescence usually single and terminal on branches; flowers small; *blueish.*

HELIOTROPIUM TENELLUM

W 6-8

Limestone glades and prairies.

Slender, wiry, much branched stems; *whole plant densely white-hairy;* to 4 dm. tall.

Leaves sessile, *very narrow, their margins often rolled.*

Small, *white flowers* terminal and solitary on numerous, short branchlets.

Specific epithet implies that plant is delicate, although it is marvelously well adapted to the rigorous conditions of its hot, parched, preferred habitat.

LITHOSPERMUM

Leaves and stem soft hairy, the former sessile and usually narrow; main stem leaves with only 2 vein.

Flower smallish; stalk of each flower or flower itself with leaf-like bract at base; stigmas 2.

LITHOSPERMUM (con't.)

Generic name Gr., "hard seed", referring to small, nut-like fruits.

1 Corolla white, to 8 mm. long, barely longer than calyx . . . **L. arvense**

1' Corolla yellow or orange, much longer than calyx

2 Leaves very narrow (5-8 mm. broad); corolla 2-4 times length of calyx, its lobes fringed . . . **L. incisum**

2' Leaves wider (to 15 mm. broad); corolla ½ to 2 times length of calyx; lobes entire . . . **L. canescens**

LITHOSPERMUM ARVENSE* **Corn Gromwell**

W 4-6

Waste areas and cultivated fields.

Slender, rough-hairy stems, to 8 dm. tall.

Leaves many, rough-hairy on both sides; only central vein obvious.

Small flowers white, and as in key.

Common name seems to have an interesting derivation: "corn" in English speaking countries other than the U.S. refers not only to **Zea mays**, the marvelous grain we inherited from the Indians, but to all grains. Therefore, the 1st part of the common name implies that this species may be found growing with grain, which fits with the specific epithet, **arvense**, which means that this **Lithospermum** is a weed of cultivated fields. Furthermore, "gromwell" seems to derive from two bases that translate to mean "gritty meal" or "millet" . . . here then we have a weedy plant of grain fields, with its own fruits being similar to grains, but very gritty. This we know is true from the generic name **Lithospermum**, "hard seed".

LITHOSPERMUM CANESCENS **Hoary Puccoon**

O 4-6

Dry, open areas, especially glades.

Often several soft-hairy stems from base; to 4.5 dm. tall.

Leaves soft-hairy and blunt-tipped to acute; lower leaves shorter than upper.

Orange flowers crowded in showy inflorescence; as in key.

Specific epithet Lat., "gray-haired".

BORAGINACEAE

LITHOSPERMUM INCISUM Narrow-leaved Puccoon

Y 4-6

Prairies and other open areas; less common than other 2 spp.

Stems one or few, first simple, later much branched; to 4 dm. tall.

Leaves very narrow; densely sharp-hairy; pointed.

Early flowers very showy and as in key; later flowers do not open, but are self-pollinated, a condition known as "cleistogamy".

Specific epithet Lat., "sharply cut" refers to fringed corolla lobes.

MERTENSIA VIRGINICA Blue Bells

B and P 3-4

Moist, rich woods and low slopes.

Stem rather succulent, smooth and to 7 dm. tall.

Leaves entire, alternate, glaucous, the lower long petioled, the upper short petioled or sessile; dying back after flowering.

Corolla trumpet-shaped; shallowly 5 lobed; pink at first, but turning blue.

MYOSOTIS VIRGINICA Scorpion Grass

W or B 4-5

Fields and waste areas; mostly dry soil.

Stems erect, often branched from base, noticeably hairy; to 4 dm. tall.

Leaves stiff-hairy; entire and sessile.

Flowers tiny and inconspicuous, with sepals of 2 different lengths; some hooked hairs at base of calyx.

Common name refers to inflorescence (typical of family) as similar to coiled tail of scorpion, and to somewhat grass-like leaves.

ONOSMODIUM False Gromwell

W 5-7

Several species of this coarse plant grow in our area.

Dry, open areas.

Stems usually (but not always) hairy, to 10 dm. tall.

Leaves alternate, sessile, long and fairly narrow.

Flowers greenish to yellowish white, the calyx deeply divided and densely soft-hairy; most tell-tale character is the extremely long style, extending far beyond flower tube.

Common name from its resemblance to **Lithospermum** (which see).

BRASSICACEAE Mustard Family (often called **Cruciferae**)

Leaves alternate, simple, without stipules; the basal leaves often very different from those on stem.

Inflorescence: raceme or corymb.

Flowers regular, perfect, 4-merous; perianth parts free, the petals often clawed, the sepals deciduous; hypogynous, the pistil single; stamens six, 2 opposite pairs, separated by shorter, single stamens between them.

Common name refers to genus with characteristically pungent juice, as have many other family members (radish, cabbage, water-cress, etc.). Old family name, Cruciferae, refers to cross-like pattern of petals; the newer, Brassicaceae, refers to the genus of which mustard, cabbage, cauliflower, broccoli, brussel sprouts, and turnip are all members.

Members of this family bloom in confusing abundance during spring and early summer; although their relationship on this level is not difficult to recognize, the gerera and species become increasingly so. At the generic level, the fruits are often the most helpful differentiating character; fortunately, these form early in the blooming season, from the outer or lower flowers of the characteristic inflorescence and are, therefore, available while the innermost or upper flowers are still blooming.

The following key will help differentiate among the genera that grow in our area:

1 Flowers white or whitish

2 Fruit less than 4 times as long as broad

3 Fruits more or less heart-shaped

4 Leaves of basal rosette compound . . . **Capsella**

4' All leaves simple

5 Cauline leaves clasping by acute lobes . . . **Lepidium**

5' Cauline leaves not clasping . . . **Thlaspi**

BRASSICACEAE Mustard Family (con't.)

3' Fruits oval

6 Stem leafy; leaves serrate . . . **Lepidium**

6' Few or no stem leaves; leaves entire or nearly so . . . **Draba**

2' Fruits more than 4 times as long as broad

7 Flowers small

8 Fruits (in our most common species) down-curved . . . **Arabis**

8' Fruits erect

9 Stems glabrous at base . . . **Cardamine**

9' Stems hairy at base . . . **Sibara**

7' Flowers showy

10 Fruits flat and pointed

11 Leaves palmately compound . . . **Dentaria**

11' Leaves pinnately compound, 5-17 leaflets with lowest minute . . . **Leavenworthia**

10' Fruits roundish in cross-section, with blunted tips

12 Hairy plant; lower leaves minutely serrate . . . **Hesperis**

12' Glabrous plant; lower leaves deeply cut, with winged petioles . . . **Iodanthus**

1' Flowers not definitely white or whitish

13 Flowers yellow to orange

14 Basal leaves bipinnate; fruits club-shape . . . **Descurainia**

14' Leaves entire or deeply pinnately lobed and/or serrate

15 Plants of marsh or wet habitat; fruits nearly as thick as wide, roundish, without beak . . . **Rorippa**

15' Non-marsh habitats, fruits relatively long and slender

16 Fruit round or angled with a conspicuous terminal beak more than 5 mm. long . . . **Brassica**

16' Fruit linear, elongate

17 Leaves and stems densely pubescent; fruits elongate, hairy, and 4-angled . . . **Erysimum**

17' Leaves and stems glabrous to slightly hirsute

18 Basal leaves with large terminal lobe nearly entire and often cordate; 2 to several small lateral lobes; base of petiole often leafy; upper cauline leaves slightly clasping . . . **Barbarea**

18' Basal leaf petioles non-leafy at base; upper cauline leaves nonclasping; beak of fruit less than 5 mm. long . . . **Sisymbrium**

BRASSICACEAE Mustard Family (con't.)

13' Flowers violet to blue

19 Plant glabrous; mature fruits to 3 cm. long . . . **Iodanthus**

19' Plant more or less hairy; mature fruits 5-14 cm. long . . . **Hesperis**

ARABIS

Both basal rosette and stem leaves present, some or all serrate (in included species); cauline leaves smaller, simple, sessile

1 No leaves clasping; plants at least somewhat hairy . . . **A. canadensis**

1' Some or all stem leaves clasping

2 Plants glabrous

3 Stem leaves glaucous, gray-green . . . **A. laevigata**

3' Stem leaves not glaucous; dark green . . . **A. missouriensis**

2' Plants hairy . . . **A. shortii**

ARABIS CANADENSIS Sickle Pod

W 4-6

Open, usually dry, rocky areas.

Stem hairy below, sparingly branched and smooth above; to 9 dm. tall.

Lower leaves hairy, toothed, gray-green; all leaves narrowed to base.

Common name from shape of fruits.

ARABIS LAEVIGATA Smooth Rock Cress

W 3-6

Rocky bluffs; along streams, or in other low, rocky areas.

Glabrous, glaucous stem, rarely branched, to 9 dm. tall.

Basal rosette leaves petioled, often purplish, soon wilting; stem leaves bluish-gray, glaucous, entire or serrate, sessile, and at least some clasping.

Specific epithet and part of common name refer to smoothness; common name also to favored type of habitat.

BRASSICACEAE

ARABIS MISSOURIENSIS

W 4-6

Generally in upland areas, in acid soil.

Plant glabrous throughout; stem to 5 dm. tall.

Stem leaves dark green, sharply toothed and clasping.

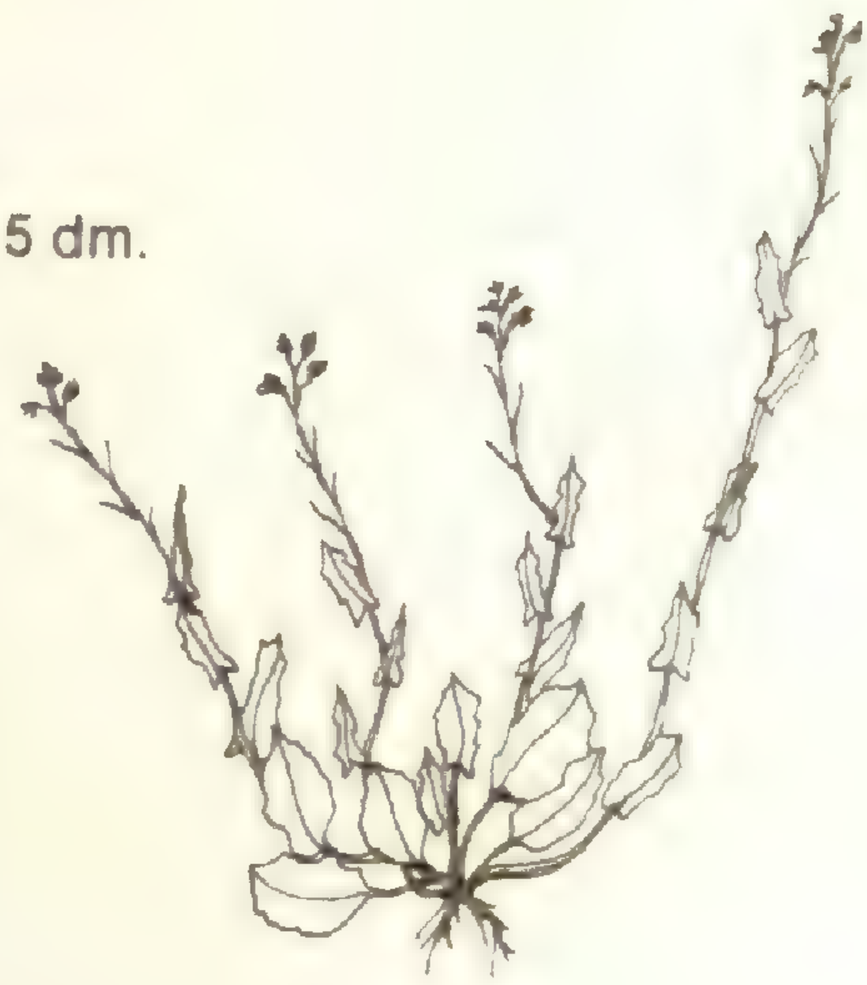
ARABIS SHORTII

W 4-6

Rich moist woods, rocky or alluvial.

Stem branched from base, lightly hairy to 5 dm. tall.

Leaves with unbranched hairs above, star-shaped branching hairs on the lower surface; clasping.



BARBAREA VULGARIS* Yellow Rocket or Winter Cress

Y 3-6

Introduced weed of wet, open areas.

Usually smooth stem, branched above; to 8 dm. tall.

Rosette and lower stem leaves petioled and lobed, the terminal lobe largest; upper stem leaves clasping; all leaves are dark green, smooth, shiny.

Common name from fact that leaves remain green all winter; generic name for similar reason: the leaves could be eaten on St. Barbara's day, in early December.

BRASSICA* Mustard

Y 4-10

Several species, all fairly rare, in our area.

Distinguished from **Barbarea** most readily by long-beaked fruits.

CAPSELLA BURSA-PASTORIS* Shepherd's Purse

W 2-11

Weed of lawns, gardens, roadsides; any open area.

Stem smooth or slightly hairy; sparingly branched; to 6 dm. tall.

Rosette of deeply dissected, petioled leaves; stem leaves smaller, sessile and clasping.

Flowers long-pedicelled, their petals longer than sepals.

Again, the common name and the generic name refer to shape of the fruit; the former inferring a likeness to the purse anciently carried by shepherds, the latter likening it to a little box.

CARDAMINE BULBOSA Spring Bitter Cress

W 3-6

Low, wet woodlands or meadows.

Glabrous stem; sparingly branched, if at all; to 5 dm. tall.

Lowest leaves roundish, long petioled; stem leaves scattered, mostly sessile, longer than broad; toothed.

BRASSICACEAE

CARDAMINE PARVIFLORA Small-flowered Bitter Cress

W 3-7

Thin, usually acid, soils of open areas.

Stems to 3 dm. tall, glabrous.

Leaves pinnately compound, 2-4 cm. long, with 3-6 pairs of opposite leaflets.

DESCURAINIA PINNATA Tansy Mustard

Y-G 4-5

Rocky, usually dry, open areas.

Leaves alternate, finely pinnately cut; grayish from dense covering of hairs.

Common name comes from similarity of foliage to that of tansy, a quite unrelated plant (**Tanacetum**) in the Asteraceae.

DENTARIA LACINIATA Toothwort

W 3-4

Damp woods; to 4 dm. tall; this is one of the few showy members of its family.

Whorl of 3 petioled stem leaves, each with 3-5 toothed segments; palmately compound; young leaves often tinged with purple, variable

Inflorescence a terminal raceme of often nodding white flowers tinged with pink.

Generic and common names both refer to resemblance of underground stem to animal teeth; specific name refers to leaves as "slashed", i.e., deeply divided.

DRABA Whitlow Grass

Inflorescence: raceme.

Flowers white (in our area), small.

Generic name translates to mean "acrid"; common name from ancient belief that some species could cure "whitlows," sores that develop around nails, or in the hooves of horses.

1 Leaves scattered along length of stem . . . **D. brachycarpa**

1' All leaves near base of plant

2 Leaves only in basal rosette; petals split into 2 lobes . . . **D. verna**

2' Several leaves just above basal rosette; petals merely toothed . . . **D. cuneifolia**

DRABA BRACHYCARPA Short-fruited Whitlow Grass

W 3-4

Fields, lawns, grazed pastures, roadsides, etc.; usually dry areas.

Stem usually much-branched; minutely hairy; to 2 dm. tall.

Rosette leaves soon deciduous; stem leaves sessile, narrowing upwards.

DRABA CUNEIFOLIA Wedge-leafed Whitlow Grass

W 2-4

Rocky, usually limestone, open areas; our most common species.

Branched, if at all, near base; hairy stem to 3 dm. tall.

All leaves (basal and stem) coarsely toothed, rough hairy, wedge-shaped.

Petals toothed.

BRASSICACEAE

W 2-4

DRABA VERNA Spring Whitlow Grass

Lawns, cultivated fields, roadsides, etc.

Stems very slender, leafless, to 15 cm. tall.

Basal leaves crowded, hairy.

Petals split into 2 lobes.

O-Y 4-7

ERYSIMUM CAPITATUM Western Wall Flower

Rocky, open areas; tops of bluffs, in limestone soils; one of few showy members of family.

Slender, hairy stem to 1.2 m. tall.

Leaves narrow, alternate, broadly-toothed.

Flowers very showy.

Specific epithet refers to knobbed stigma.

Y 3-6

ERYSIMUM REPANDUM* Treacle Mustard

Weedy plant of waste areas.

Stem usually much branched (especially later in its season); hairy; to 6 dm. tall.

Leaves hairy, wavy, lanceolate; the smaller often entire, the larger commonly dentate.

Small flowers in zig-zag raceme; sulphur yellow and, en masse, quite showy.

Specific epithet Lat., "wavy" refers to leaves.

HESPERIS MATRONALIS* Dame's Rocket

P or W 5-6

Garden escape, found in various habitats, both shaded or open.

Hairy stem, simple or branched above; to 10 dm. tall.

Leaves hairy, alternate, sharply toothed, sessile or short-petioled.

Flowers fragrant; showy, as a garden escape should be; easily confused with **Phlox**, but 4 petals mark distinction.

Generic name from Gr., "evening," at which time flowers are most fragrant; both specific epithet and common name refer to matrons, for reason unknown to us.

IODANTHUS PINNATIFIDUS Purple Rocket

V-W 5-6

Moist soils of flood plain or low wet woods.

Stem simple below inflorescence, glabrous or nearly so; to 1 m. tall.

Leaves thin, pointed, sharply toothed; tapering to petiole-like base; often clasping, larger or lower leaves often pinnate at base, with 1-4 pairs of small lobes.

Generic name Gr., "violet-colored flower" (but appears white in certain lights).

Specific epithet refers to leaves.

LEAVENWORTHIA UNIFLORA

W-P-V 3-4

Rocky woods, glades, and limestone barrens; a winter-annual that disappears quickly in late spring.

Rosette plant with scapes to 15 cm. high.

Deeply cut dark-green leaves with 7-15 lobes.

Petals purplish or nearly white with yellowish base.

Specific epithet refers to the one-flowered inflorescence.

BRASSICACEAE

W 4-9

LEPIDIUM CAMPESTRE Cow-Cress or Field Peper Grass

Waste places and roadsides; usually in large colonies.

Stems freely branching and *hairy*, to 7 dm. high; gray-green appearance.

Leaves hairy and gray-green; basal leaves petioled and entire to deeply pinnately lobed; *stem leaves numerous and clasping with arrow-shaped bases.*

Inflorescence slender ascending raceme with uniform slender pedicels.

Flowers white and less than 3 mm. wide with petals slightly exceeding sepals; *6 stamens.*

Specific epithet Lat., "of fields."

W 2-11

LEPIDIUM VIRGINICUM Pepper Grass, Poor Man's Pepper

Open areas, rocky outcrops, etc.

Usually *glabrous* plant, to 9 dm. tall.

Basal leaves usually deeply cut, with large terminal lobe; *stem leaves serrate, not clasping.*

Inflorescence: slender spike; tiny flowers with only *2 stamens.*

Generic name Gr., "little scale" refers to almost round fruit; common name refers to taste, in part; "grass" more logically applied to species with narrower leaves.

W 4-10

NASTURTIUM OFFICINALE Water Cress

Cold spring water, in which plants grow partly submerged.

Succulent, smooth stems, creeping or freely rooting in moist soil or stream bed; only found in large colonies.

Leaves pinnate with 3-9 obtuse segments, terminal segment roundish and much the largest.

Generic name Lat., "twisted nose," **(nasus tortus)** referring to pungent odor and taste; the garden nasturtium so-named for same reason, but botanically it is unrelated.

RORIPPA Yellow Cress or Marsh Cress

Y 4-7 and 10

Several species in our area, blooming from April or May to July or later.

Plants glabrous, with leaves pinnately divided, deeply or not so.

Petals yellow or none.

SIBARA VIRGINICA

W 3-5 and 10-11

Open or wooded wet areas.

Stiff stem, hairy below, glabrous above; branching from, or close to, base; to 4 dm. tall.

Leaves deeply cut, with a terminal leaflet.

This plant is described in Gray's *Manual* (8th ed.) as "intermediate between **Cardamine** and **Arabis**; its generic name refers indirectly to such an association, by the fact that **Sibara** is **Arabis** spelled backwards!" Some authors actually call it **Arabis virginica.** It differs from **Cardamine** in the hairy lower stem, and in quite different leaves.

SISYMBRIUM ALTISSIMUM* Tumble Mustard

Y 4-5

Open, rocky areas.

Loosely branching stem, hairy at base, to 1.5 m. tall.

Leaves deeply pinnate, the lower into 5-8 pairs, the upper into 2-5 pairs of segments; segments going from lanceolate and serrate below to linear and entire above.

Common name from fact that, at maturity, plants often break off at base and are blown over the ground, thus efficiently dispersing their seeds.

Y 5-10

SISYMBRIUM OFFICINALE* Hedge Mustard

Roadsides and fields.

Stems stiff and hairy, especially at the base, to 6 dm. tall.

Stem leaves either coarsely cut with lanceolate or triangular lobes, or nearly without teeth; petioles slender.

Spike-like racemes.

Flowers pale yellow, 3 mm. long.

Specific epithet refers to medical repute.

W 3-4

THLASPI* Penny Cress

2 species, both glabrous.

Most stem leaves clasping.

Fruits flat, roundish and notched at top.

Common name refers to fruit.

CACTACEAE Cactus Family

Succulent plants with green, fleshy stems.

Leaves usually lacking on mature plants; although the thorns may be interpreted as reduced leaves.

Flowers perfect, solitary, epigynous, regular, the calyx similar to corolla; showy

Y 5-7

OPUNTIA COMPRESSA Prickly Pear

Rocky, dry open areas; glades, prairies, etc.

Stems fleshy, flat, jointed, with clusters of barbed hairs and spines.

Dark, scale-like leaves soon deciduous.

Large, yellow flowers very showy; often with reddish centers.

Common name refers to edible fruit.

CAMPANULACEAE Bluebell Family

Plants sometimes with milky sap.

Leaves usually alternate, simple and without stipules.

Flowers usually perfect, 5-merous; petals united; stamens sometimes united.

1 Corolla irregular, the tube deeply split on one side; anthers joined; plants with milky sap . . . **Lobelia**

1' Corolla regular; anthers not united; no milky sap

2 Corolla less than 15 mm. long, 10-15 mm. broad; flowers sessile or nearly so . . . **Specularia**

2' Corolla 5-30 mm. long, 10-25 mm. broad, flowers usually pedicelled . . . **Campanula**

CAMPANULA AMERICANA Tall American Bellflower

B 6-10

Rich, moist woods.

Unbranched or with a few branches, to 2 m. tall.

Leaves alternate, serrate, lanceolate, long-pointed and with margined petioles.

Flowers in uncrowded, terminal spikes; corolla tube short, with spreading lobes; very showy.

CAMPANULACEAE

LOBELIA

Plants with milky, often poisonous juice.

Leaves alternate, simple, without stipules.

Corolla 2-lipped, the stamens with united anthers (and sometimes filaments) more or less protruding through cleft corolla; anthers usually colored.

1 Corolla red, vermillion, or rose-color . . . **L. cardinalis**

1' Corolla white, blue, or violet

2 Corolla blue and greater than 1.5 cm. long . . . **L. siphilitica**

2' Corolla white or violet and less than 1 cm. long

3 Stem hairy, at least near base, and usually branched; middle leaves coarsely serrate; calyx tube conspicuously inflated in fruit . . . **L. inflata**

3' Stem glabrous or with very short hairs; usually unbranched; middle leaves entire or with very fine teeth; calyx tube not much inflated in fruit . . . **L. spicata**

R 7-10

LOBELIA CARDINALIS Cardinal Flower

Wet areas, as muddy or gravelly stream borders; ditches.

Stem unbranched, coarse, smoothish, to 1.8 m. tall.

Leaves numerous, thin, glabrous, lanceolate; irregularly toothed.

Usually red flowers in terminal raceme, each subtended by a narrow bract; pedicels shorter than bracts.

V-W 6-10

LOBELIA INFLATA Indian Tobacco

Rocky open, usually moist wooded areas.

Branching, hairy stem to 1 m. tall

Leaves alternate, toothed, hairy on lower surface; the upper sessile, lower somewhat petioled

Racemes at tips of branches, with inconspicuous bracts subtending inconspicuous flowers

Specific epithet refers to inflated calyx which surrounds fruit; common name to fact that Indians so used the plant, smoking it in treatment of various respiratory ailments.

LOBELIA SIPHILITICA Blue Cardinal Flower

B 8-10

Low, wet areas.

Stem unbranched, coarse, mostly smooth, to 1.3 m. tall.

Leaves alternate, lanceolate, tapering to sessile base; thin, stiff-hairy on upper surface.

Flowers in dense raceme; corollas extending beyond stamen tube and stigma; subtending bracts leaflike at base, but diminishing upwards.

Specific epithet refers to incorrect belief that plant was a cure for venereal disease.

LOBELIA SPICATA Pale-spike Lobelia

V-W 5-8

Prairies, glades, etc.; usually on wet soil.

Stem short-hairy below, glabrous above; simple or with few branches; to 1 m. tall.

Lower leaves with short, winged petioles, bristle hairy; upper sessile, with narrow bases.

Racemes slender, crowded; pedicels hairy, with inconspicuous bracts.

SPECULARIA BIFLORA Small Venus' Looking Glass

B 4-6

Dry, rocky open areas; more common of our local species.

Stem hairy below, rough above; simple or branching, mostly below; angular, to 10 dm. tall.

Leaves roundish, sessile, palmately veined; *not clasping; longer than broad.*

Only 1-2 petaled flowers at top, these with 4-5 sepals, those below with 3-4.

Specific epithet refers to 2 kinds of flowers: those with open corollas (at top of plant), and those with closed corollas below.

CAMPNAULACEAE - CAPPARACEAE

SPECULARIA PERFOLIATA Venus' Looking Glass

P-V 4-8

Open, usually moist, areas.

Stem hairy, little branched, angular to 10 dm. tall.

Leaves roundish, with *clasping, heart-shaped base;* usually toothed, hairy, palmately veined; *about as broad as long.*

Flowers sessile in leaf axils, only the upper with true corollas; 5 sepals.

Specific epithet refers to leaves that surround stem.

CAPPARACEAE **Caper Family** (often called **Capparidaceae**)

Leaves alternate, mostly palmate.

Flowers with 4 petals, 6 or more stamens; easily confused with the **Brassicaceae**, but these flowers usually not regular, and stamens are differently arranged.

POLANISIA DODECANDRA Clammy-weed

W 5-10

Sand and gravel bars; fetid plants with clammy, glandular hairs.

Stem branched, hairy, to 5 dm. tall.

Petioled leaves with 3 leaflets.

Flowers in leafy racemes, the petals whitish, calyx and filaments purplish; stamens about 11.

Generic name and specific epithet both refer to the many, unequal stamens, the main difference between this and the garden plant, cleome which has only 6.

CAPRIFOLIACEAE Honeysuckle Family

Mostly woody plants, in our area (**Triosteum** is herbaceous).

Leaves opposite and without stipules (except in **Sambucus**); frequently toothed; usually simple.

Flowers perfect, epigynous, with 5 small united sepals; 5 joined petals; 5 stamens.

Family readily confused with **Rubiaceae**, which is predominantly herbaceous in our area; leaves of the Honeysuckle family mostly without stipules.

1 Leaves compound . . . **Sambucus**

1' Leaves simple

  2 Herbaceous plant . . . **Triosteum**

  2' Woody shrubs or vines

    3 All leaves (except youngest) normally toothed . . . **Viburnum**

    3' All leaves normally entire

      4 Usually vines; corolla showy, its lobes unequal . . . **Lonicera**

      4' Shrubby plant; corolla small, its lobes mostly equal . . . **Symphoricarpos**

LONICERA Honeysuckle

Woody plants, all climbing or sprawling in our area.

Leaves entire, simple, opposite, without stipules.

Flowers showy and fragrant in terminal inflorescence of 6-flowered whorls, or in leaf axils, each peduncle bearing 2 flowers.

LONICERA FLAVA Yellow Honeysuckle

Y 4-5

Rocky areas; woods, bluffs, etc. The only native honeysuckle frequent in our area.

Climbing, twining vine; *stem glabrous.*

Uppermost leaves joined around stem; others short petioled;green or barely glaucous on upper surface; pale green below.

Terminal inflorescence of yellow-orange, fragrant flowers in 1-3 crowded whorls.

Specific epithet Lat., "yellow".

CAPRIFOLIACEAE

LONICERA JAPONICA* Japanese Honeysuckle

W 4-6

Thickets, fence rows, roadsides, ditches, etc.; a *very* weedy plant, taking over, wherever it gets a start.

Twining, sprawling vine, the *young stems hairy.*

Leaves entire, short petioled.

Inflorescence of paired flowers borne on axillary peduncles; flowers hairy on outside of tube; stamens and style protruding; very fragrant.

SAMBUCUS CANADENSIS Common Elderberry

W 5-7

Moist open areas, spreading by underground stems, and therefore, often found in large colonies.

Shrub to 3 m. tall, the younger stems soft; with long internodes and large white pith; stems yellowish-gray.

Leaves compound with 5-11 (usually 9) leaflets, the lowest often again divided; pointed, sharply toothed, variable in size.

Inflorescence composed of small (3-5 mm. wide) fragrant white flowers.

Generic name, Gr., for some musical instrument, probably referring to fact that pith of young twigs can be readily removed to make flutes.

SYMPHORICARPOS ORBICULATUS Coral Berry

G-P-V 7-8

Pastures and other open areas; in 2nd growth dry, rocky woodlands; one of our most common shrubs.

Much-branched shrub to (but rarely) 2 m. tall; twigs very slender, usually downy.

Leaves short-petioled; blunt at both ends; untoothed, but often with wavy margins; oval to almost round.

Flowers sessile and crowded in numerous axillary and terminal clumps.

Generic name Gr., "to bear together", referring to clustered fruits.

TRIOSTEUM Horse Gentian

Coarse herbaceous plants with leafy stems.

Leaves numerous, entire, sessile; tapering to the base or surrounding the mostly unbranched stem.

Flowers solitary or in small axillary clusters.

Generic name abbreviation from Gr., referring to 3 bony seeds in fruit; common name refers to similarity to Gentian (which see), the fact that this similarity is limited by the word "horse" probably refers to coarseness or size of the plant, as opposed to most Gentians.

1 Corolla yellow-green; stem bristly, long- (to 3 mm.) hairy; upper leaf surface hairy (hairs to 2 mm. long); only 2 flowers at base of pair of leaves . . . **T. angustifolium**

1' Corollas not green; stem glabrous, or at most with soft hairs, to 2.5 mm. long; upper leaf surface glabrous, or with hairs only 1 mm. long; 2-8 flowers at base of a pair of leaves

2 Corolla purple to pale yellow; usually 3-5 pairs of leaves united around stem . . . **T. perfoliatum**

2' Corolla purple; all leaves usually narrowed to base (1-3 pairs sometimes united) . . . **T. aurantiacum**

TRIOSTEUM ANGUSTIFOLIUM Yellow-flowered Horse Gentian

Y-G 4-5

Rich woods, often on north-facing bluffs.

Stem conspicuously bristle-hairy; slender, to 8 dm. tall.

Leaves tapering to sessile base, upper surface hairy.

Greenish-yellow flowers, with flared corollas, in leaf axils; only 2 at base of opposite leaves.

Specific epithet refers to narrow leaves, at most 2.6 cm. broad.

CAPRIFOLIACEAE

P 4-7

TRIOSTEUM AURANTIACUM

Rich woods, often on north-facing bluffs.

Stems sparsely soft-hairy.

Leaves usually all separate, tapering to bases, but sometimes 1-3 pairs united; hairy on lower surface, less so above.

Two-lipped corolla red-purple; usually 3 flowers at leaf axil.

Specific epithet refers to orange-colored fruits.

P-Y 4-7

TRIOSTEUM PERFOLIATUM Common Horse Gentian, Tinker's Weed

Coarse plant to 13 dm. tall; hairy below.

Leaves abruptly narrowed below middle, but spreading farther down to bases which completely surround the stem; sparsely bristled above, usually soft-hairy below; dark green, thickish.

Flowers 1-4 in each axil; corollas pink to pale yellow.

One source explains common name "tinker's weed" as referring to a colonial physician by that name who used the plant as a cathartic and to reduce fevers; Gray gives whole genus common name of "feverwort", obviously referring to same usage.

W 4-5

VIBURNUM PRUNIFOLIUM Black Haw

Varied habitats, but not common in our area.

Small tree or shrub to 8 m. tall; gray barked with interrupted low ridges; often rather scaly.

Leaves finely serrate, *dull green on upper surface*, paler on lower; *glabrous on both surfaces;* petioles grooved.

White flowers to 7 mm. wide.

Specific epithet refers to leaf shape as being similar to that of plums; common name refers to fruits.

VIBURNUM RUFIDULUM **Southern Black Haw or Wild Raisin**

W 4-5

Rocky and/or rich alluvial areas.

Coarse shrub or small tree, to 10 m. tall, with dark bark broken into squarish blocks.

Leaves lustrous, finely serrate, thick; *parts of under surface and petioles densely covered with rusty hairs*; petioles grooved and often slightly winged.

White flowers to 8 mm. wide.

Specific epithet refers to reddish hairs covering several parts of plant.

CARYOPHYLLACEAE Pink Family

Stems often swollen at nodes.

Leaves opposite, simple, entire, often connected by a thin line around stem; sessile and usually without stipules.

Flowers usually complete; 4-5 merous; usually white or pink; hypogynous; regular; petals often notched and/or narrowed to clawed base.

1 Sepals separate to base, or nearly so

2 Terminal inflorescence of 3-8 stalked flowers; umbellate . . . **Holosteum**

2' Inflorescence otherwise

3 Leaves less than 1 mm. broad

4 Styles usually 3; 5 conspicuous petals . . . **Arenaria**

4' Styles 4-5; 4-5 inconspicuous petals . . . **Sagina**

3' Leaves broader

5 Styles 5; stems hairy . . . **Cerastium**

5' Styles 3; stems glabrous or with inconspicuous hairs

6 Petals entire or with shallow notch . . . **Arenaria**

6' Petals deeply notched . . . **Stellaria**

1' Sepals united into tube

7 1-3 pairs of small, leaflike bracts at base of calyx . . . **Dianthus**

7' No such bracts present

8 Calyx lobes longer than petals . . . **Agrostemma**

8' Calyx lobes not extending beyond petals

9 Styles 2; calyx scarcely or 5-veined . . . **Saponaria**

9' Styles 3; calyx 5, 10 or 20 veined . . . **Silene**

CARYOPHYLLACEAE

P 5-9

AGROSTEMMA GITHAGO* Corn Cockle

Fields, roadsides and waste areas.

Stem thinly hairy; to 1 m. tall.

Opposite leaves sharp pointed; lanceolate.

Showy flowers, to 4 cm. across; petals paler toward narrowed base and black spotted;
calyx lobes extend beyond petals; calyx tube strongly 10-veined; 10 stamens.

ARENARIA Sandwort

Low, herbaceous plants.

Leaves opposite, sessile and without stipules.

Flowers with 5 sepals and petals, 10 stamens and, usually, 3 styles.

Generic name from same Latin root as "arena", referring, as does common name, to sandy soils as the preferred habitat.

1 Leaves to 1.5 mm. wide

  2 Stem leaves opposite (in 2's) without axillary clusters of leaves . . . **A. patula**

  2' Stem leaves with more than 2 clustered at node, with tufts of smaller leaves in main axils . . . **A. stricta**

1' Leaves to 3-15 mm. wide . . . **A. serpyllifolia**

ARENARIA PATULA Sandwort

W 4-6

Rocky glades and prairies.

Slender-stemmed, diffusely branched from base; to 3 dm. tall.

Soft, opposite leaves, very narrow (to 1-5 mm. broad).

White flowers with notched petals; in open-branched inflorescence, often from below middle of stem.

Generic name, see above; specific epithet refers to diffuse branching of stem.

ARENARIA SERPYLLIFOLIA* **Thyme-leaved Sandwort**

W 4-8

Common weed of dry, open areas.

Stem rough-hairy, often wiry and much-branched; to 2 dm. tall.

Leaves opposite, sharp-pointed, ovate, to 4 mm. wide; rough.

White flowers with entire petals, shorter than sepals; sepals sharp-tipped, rough margined.

Generic name, see previous page; thyme leaved is translation of specific epithet.

ARENARIA STRICTA **Rock-Sandwort**

W 5-7

Dry rocky ledges and glades.

Wiry, glabrous stems branching from a leafy base; to 3 dm. tall.

Leaves rigid, strongly ribbed, 6-30 mm. long; usually subtending fascicles of shorter leaves.

Inflorescence loosely cymose with 3-30 flowers; flowering branches to 3 dm. high; glabrous, with fascicles of leaves.

Petals oblong, twice as long as sepals; 5 sepals 4-5 mm., 10 stamens, 3 styles.

Generic name, see previous page; specific epithet refers to upright stem.

CERASTIUM* **Mouse-ear Chickweed**

W 3-11

5 species of this weedy little plant in our area. All share the following characteristics:

Stems usually sticky-hairy.

Inflorescence: terminal cluster.

Petals 5, notched; sepals free; stamens 10; styles 5.

"Mouse-ear" probably refers to small, hairy tips of sepals that show between petals of some species.

CARYOPHYLLACEAE

DIANTHUS ARMERIA* Deptford Pink

P 5-10

Open woodlands, fields, roadsides, etc.

Stiff stem, usually rough-hairy just below nodes, otherwise glabrous; to 6 dm. tall.

Basal leaves numerous; stem leaves narrow (to 8 mm. wide), in 5-10 pairs, hairy and with hairy margins.

Pink flowers crowded in terminal inflorescence; sepals united; calyx subtended by narrow, hairy bracts; petals white dotted, with toothed margins.

HOLOSTEUM UMBELLATUM* Jagged Chickweed

W 3-4

Roadsides etc. This is a relatively recently introduced weed, 1st reported in 1950, but now widely spread throughout our area (easily confused with **Draba**).

Several unbranched stems from base; glabrous, or nearly so, below; sticky above; to 3 dm. tall.

Basal leaves oblong, pale; stem leaves wider.

White flowers 3-8, in terminal umbel; sepals free; 3 styles; usually 3-5 stamens; petals toothed.

Specific epithet describes inflorescence;
common name refers to fact that margin of petals is toothed, on a plant very similar to other "chickweeds", all of which, presumably, produce seeds tasty to chicks.

SAGINA DECUMBENS Pearlwort

W 3-8

Fields, pastures, sandy, rocky ground; waste areas.

Low, matted, delicate plant, with stems to 15 cm. long.

Opposite leaves very narrow, joined at base.

White flowers with inconspicuous petals or none; sepals free; styles 4-5; stamens usually 4-5; flowers solitary and terminal.

SAPONARIA OFFICINALIS* Bouncing Bet or Soapwort

P-W 5-10

Weedy plant of fields, roadsides, or even in the city; spreading by underground stems and often covering large areas.

Stems coarse and glabrous, to 8 dm. tall.

Leaves opposite, strongly 3-5 parallel-veined, glabrous.

Inflorescence terminal and from leaf axils; usually crowded.

Fragrant flowers frequently double; sepals united into cup around base of petals, but not exceeding petals; stamens 10, longer than floral tube.

Generic name refers to lather-forming sap, as does 2nd common name; it has been suggested that 1st common name refers to movement of flowers in the wind.

SILENE Catchfly or Campion

Herbaceous plants, often with showy flowers.

Leaves opposite and entire.

Sepals united into tube, not exceeding petals; 5, 10 or 20 veined; styles normally 3, stamens 10.

Generic name after Silenus, foster father of Bacchus, described as being "covered with foam", a reference to sticky excretions of some species; "Catchfly" refers to same characteristic; "Campion" is from Lat. for field, where plant often grows.

1 At least leaves at middle of stem whorled; petals fringed . . . **S. stellata**

1' All leaves opposite; petals not fringed

  2 Stem mostly glabrous; stem leaves less than 12 mm. wide; at least upper part of stem with dark, sticky area . . . **S. antirrhina**

  2' At least lower stem hairy

    3 Some part of stem with dark, sticky area; upper part glabrous . . **S. antirrhina**

    3' Stem completely hairy; no dark sticky areas; petals red to pink

      4 Thickish leaves in 10-20 pairs; mostly rounded, or clasping at base; flowering during summer . . . **S. regia**

      4' Thin leaves in 2-6 pairs, the middle and lower tapering at base, but not clasping; short, early blooming period . . . **S. virginica**

SILENE ANTIRRHINA Sleepy Catchfly

P 4-9

Roadsides, rocky bluffs, etc.

Stem mostly glabrous, but with dark, sticky area above; sometimes hairy below, and branched; to 8 dm. tall.

Leaves opposite, entire, less than 12 mm. wide; margins hairy at base.

Pink flowers usually numerous; 5 petals equal or longer than calyx, or sometimes lacking; calyx 10-veined; petals 2-lobed.

Specific epithet means that leaves resemble those of snapdragon, a totally unrelated plant.

SILENE REGIA Royal Catchfly

R 5-10

Rocky prairies, open woods, thickets, glades; not common.

Stems glabrous to sparingly hairy; not branched; to 1.5 m. tall.

Leaves opposite, entire; 10-20 pairs, to 7 cm. wide; rounded or clasping at base; thickish.

Inflorescence narrow and leafy.

Very showy crimson flowers; calyx tube hairy and cylindrical.

SILENE STELLATA Starry Campion

W 5-9

Usually in dry, upland woods.

Several unbranched stems from base; stiff, slender; to 8 dm. tall.

Stem leaves mostly in whorls of 4; simple, pointed; very short-hairy below, glabrous to rough above.

Inflorescence loose, elongate; white flowers with bell-shaped calyx tube, usually downy; white petals with fringed margins.

R 4-6

SILENE VIRGINICA Fire Pink, or Red Catchfly

Rocky woods, ledges and wooded slopes.

Weak, sticky-hairy stems, to 8 dm. tall.

Leaves opposite, entire; basal petioled, upper sessile or nearly so; often with red margins.

Flowers few, long stalked in open inflorescence; calyx tube cylindric, hairy and sticky; 5 red petals two-lobed; showy.

W 1-12

STELLARIA MEDIA* Common Chickweed

Weedy plant of lawns, gardens, roadsides, etc.; extremely variable in size, number of stamens, development of petals, etc.; one of most common weeds.

Weak stemmed, often trailing and rooting at nodes; tufted from base; hairy in lines; to 8 dm. long.

Leaves opposite, the lower and middle ovate, petioled, these often hairy-margined; upper leaves sessile.

Flowers solitary in axils or in clustered terminal inflorescences; 5 petals (if present) shorter than sepals, deeply bilobed.

Generic name from "star-shaped" flower; common name for tastiness of seeds to chicks.

CELASTRACEAE Bittersweet Family

Woody plants with simple, often leathery, leaves.

Flowers small, regular, usually perfect; hypogynous with short style.

CELASTRACEAE - CHENOPODIACEAE

CELASTRUS SCANDENS American Bittersweet

W 5-6

Woodlands, fence rows, rocky areas.

Viny, twiny plant, spreading by orange roots.

Leaves alternate, simple, serrate.

Flowers sometimes perfect, but plants often monoecious or dioecious; staminate with 5 stamens as long as petals and rudimentary pistil; pistillate with rudimentary stamens, well developed ovary, stout column-like style, and 3 lobed stigma; inforescence terminal, raceme-like.

Specific epithet Lat., "climbing".

EUONYMUS ATROPURPUREUS Wahoo or Burning Bush

P 4-6

Wooded slopes, open woods, bluffs, along streams, etc.

Large shrub or small tree, with 4-sided branches; to 8 m. tall.

Leaves opposite, serrate, soft-hairy on lower surface, petioled, sharp pointed.

Flowers 4-merous, perfect, few to many in branched inflorescence on axillary peduncle.

Specific epithet Lat., "dark purple", referring to both flowers and fruits.

CHENOPODIACEAE Goosefoot Family

Family consists of a number of weedy plants, of which only one genus will be considered, without attempting to differentiate among its several species.

Leaves simple, alternate and without stipules.

Flowers very small and without corollas.

Family name refers to presumed resemblance between leaves of some members and that part of the bird to which it alludes.

CHENOPODIUM Goosefoot

G-P 5-11

Weedy plants, several species of which are represented in our area, and bloom throughout most of the summer through November. Two of these are known by the common names "lamb's quarters" which, by a wide stretch of the imagination, its leaves are supposed to resemble; and "Mexican tea" for its medicinal use in the southwest; Steyermark lists 14 native, 8 introduced species in Missouri.

Flowers inconspicuous, without corollas, perfect, greenish or reddish, sessile on axillary or terminal inflorescences.

CISTACEAE Rockrose Family

Leaves entire, simple.

Flowers regular, or nearly so; hypogynous; many stamens; 5 sepals, of which 2 are larger than others.

LECHEA TENUIFOLIA Pinweed

P 6-11

Rocky, open areas with sandy soil.

Stem sparsely hairy, to 3 dm. tall.

Leaves (both stem and basal) very narrow; basal rosette formed during summer remains green throughout winter, forming fern-like mats.

Inflorescence: paniculate, but so branched as to form at least half of the plant body.

Flowers tiny, the sepals longer than, and obscuring, the petals.

Specific epithet Lat., "thin-leafed"; common name possibly from resemblance of terminal fruit to "pinhead", on slender stalk, the "pin".

CISTACEAE - COMMELINACEAE

R-B 7-11

LECHEA VILLOSA Pinweed

Rocky, open areas with acid soil.

Erect, *hairy plant,* branching above; to 8 dm. tall.

Leaves usually alternate (but often appearing whorled), entire 1-nerved; sessile or short-petioled; basal shoots with numerous, crowded leaves, formed during summer, remain green throughout winter, as a flat mass of ovate, 1.5 cm. long, leaves.

Inflorescence: paniculate.

Flowers tiny (to 4 mm. broad), usually open only during morning, showing reddish petals; otherwise only brown sepals are visible.

COMMELINACEAE Spiderwort Family

Monocot family.

Stems usually fleshy, long, jointed and twisting.

Leaves parallel veined, with sheathing bases.

Flowers, regular with 3 free, green sepals; 3 colored petals; 6 stamens, these often with long, soft hairs; hypogynous.

Common name apparently refers to an imagined similarity between the often zig-zaggy stems and the legs of a spider.

COMMELINA COMMUNIS* Day-flower

V-B 5-10

Cultivated or waste areas, most often in damp soil; often growing as a weed in cities.

Stems originally erect, but often toppling over, after which roots form from lower nodes; smoothish and fleshy; to 8 dm. long.

Leaf blades lanceolate, parallel veined.

Inflorescence closely subtended by folded, cordate, leaf-like spathe.

Flowers irregular with 1 white petal much smaller than others; anthers of 3 fertile stamens lobed and yellow; 2 stamen bent inwards.

Generic name given by Linnaeus, who dedicated the plant to 3 botanists named Commelin. 2 of these were conspicuous in their field, the 3rd botanically insignifanct, as is the small, white petal, common name that the flowers bloom during only a single day.

TRADESCANTIA Spiderwort

Plants with leafy stems and somewhat mucilaginous sap.

Leaves long, alternate, parallel veined with conspicuous basal sheaths; often keeled.

Inflorescence umbel-like, the showy flowers subtended by leaf-like bracts; axillary and/or terminal.

Flowers with distinct petals and green sepals; 6 stamens with conspicuously hairy filaments.

1 Plants no taller than about 30 cm.

  2 Plants with hairy stems and leaves . . . **T. longipes**

  2' Plants with at least the lower stem and the leaves glabrous . . . **T. virginiana**

1' Plants well over 30 cm. tall

  3 Plants both glabrous and glaucous . . . **T. ohiensis**

  3' Plants with sepals, at least, hairy from base to tip . . . **T. subaspera**

TRADESCANTIA LONGIPES Wild Crocus

P-B 4-5

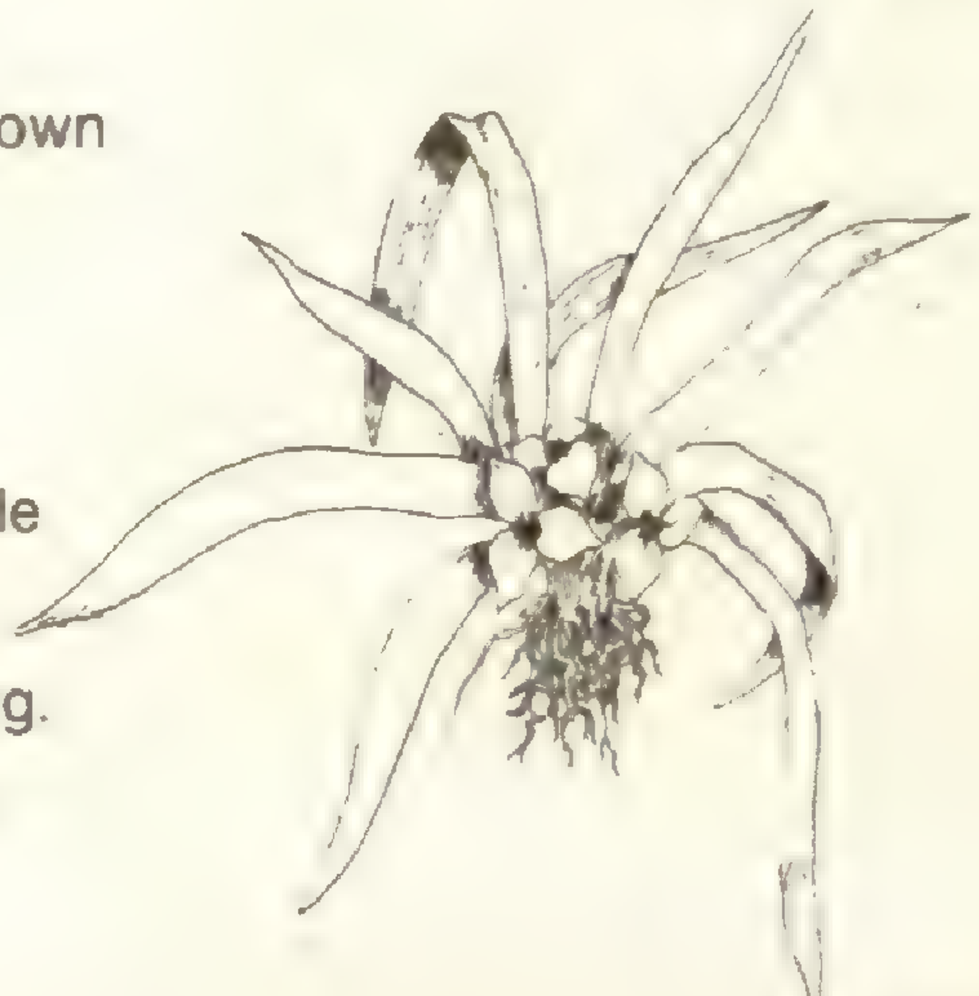
Slopes of rocky, open woodlands, often in acid soil; a narrowly endemic species, known only from Missouri.

Very low plant (to 10 cm. tall) with flowers and leaves crowded together.

Leaves hairy, dull green, firm, to 1.2 cm. wide

Flowers on purplish pedicels, sepals somewhat petaloid; both hairy; to 6 mm. long.

Specific epithet Lat., "long-stalked" refers to Pedicels, but is somewhat misleading.



TRADESCANTIA OHIENSIS

B 5-7

A variety of open habitats; this is our most common species.

Plant both glabrous and glaucous; to 7 dm. tall.

Leaves glabrous, but sheath often hairy; firm, flat, to 4.5 cm. wide.

Flowers on glabrous pedicels, to 2.5 mm. long; sepals glaucous and glabrous, or sometimes "bearded" at the tip; occasionally red-margined.

V 6-9

TRADESCANTIA SUBASPERA

Rich woods, shaded limestone bluffs, along wooded stream banks.

Stem sometimes sparsely hairy; conspicuously zig-zag; to 8 dm. tall.

Leaves dark green, firm, constricted to petiole-like base above sheath to 5 cm. wide; margins usually hairy.

Flowers on pedicels to 17 mm. long; sepals hairy from base to tip.

Specific epithet Lat., "somewhat harsh" (to the touch).

P-B 4-6

TRADESCANTIA VIRGINIANA Early Spiderwort

Found in various habitats with acid soil.

Stems glabrous or slightly hairy; to 8 dm. tall.

Leaves glabrous or nearly so; thin, dull green, often bending outwards; to 2.5 cm. wide.

Flowers on hairy pedicels to 3.5 cm. long; sepals uniformly hairy and inflated.

CONVOLVULACEAE Morning Glory Family

Plants herbaceous and usually climbing.

Leaves simple, alternate, petioled, without stipules; often cordate (leaves absent or scale-like in **Cuscuta**).

Inflorescence usually solitary, showy and short-lived.

Family name Lat., "twisted", refers to corolla that is twisted in buds, and shows evidence of this when open; common name refers to short period of bloom of individual flowers.

1 Twining plants with string-like orange, yellow or brown stems; leaves absent or scale-like, as plants are all parasitic . . . **Cuscuta**

1' Green plants with well-developed leaves

2 Stigma 1, head-shaped (and sometimes lobed) . . . **Ipomoea**

2' Stigma two-parted, each narrow and threadlike . . . **Convolvulus**

CONVOLVULUS ARVENSIS* Field Bindweed

W or P 5-9

Weedy plant, forming mats on open banks, roadsides, unkempt lawns, etc.

Stems slender, trailing, freely branched, slightly twining, to *1 m. long.*

Leaves variable, triangular to oblong in general outline; *2-5 cm. long.*

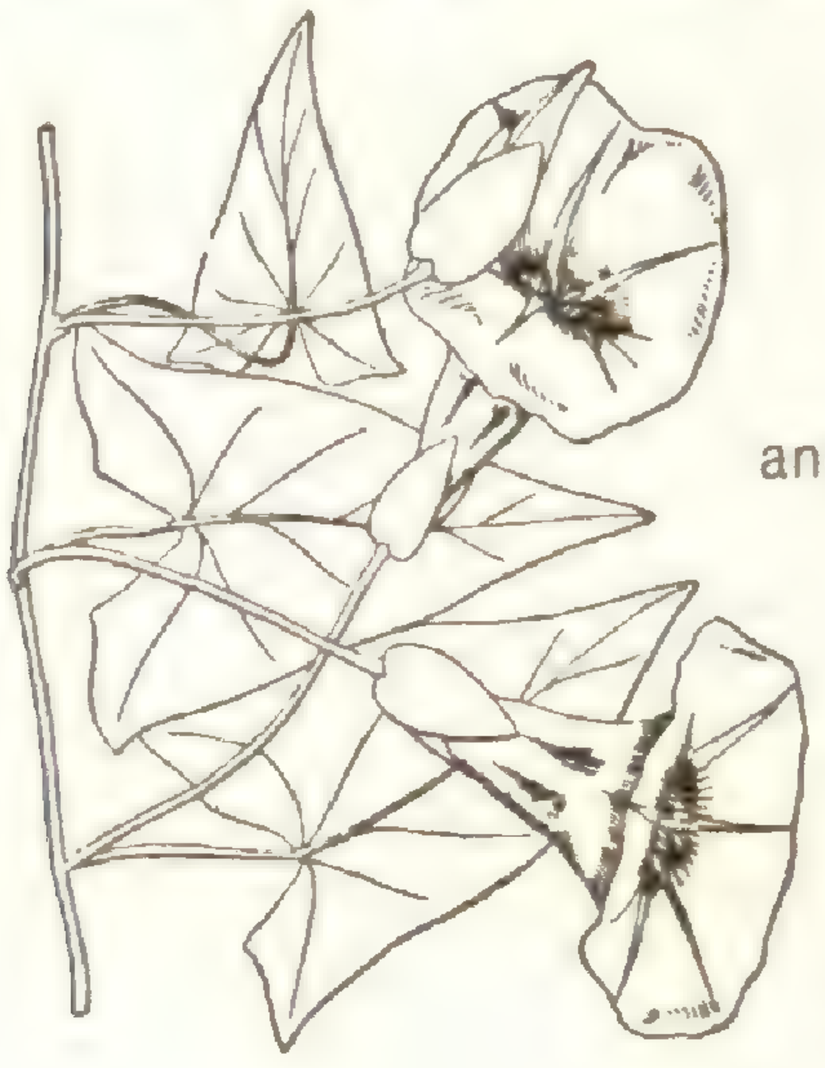
Axillary peduncles bear 1-2 flowers; pair of small bracts 5-20 mm. below flowers.

Corollas to 2 cm. long.

Generic name: Lat., "entwine" refers to same characteristic as does common name; specific epithet Lat., "of the fields".

CONVOLVULUS SEPIUM Hedge Bindweed

W or P 5-9



Variety of habitats, mostly in moist soil.

Stems twining (or occasionally trailing), freely branched, to *3 m. long.*

Leaves variable, but generally more pointed and always much larger *(5-10 cm. long)* than those of **C. arvensis**.

Axillary peduncles bear single flowers; peduncles 4-angled; pair of large leaf-like bracts at very base of calyx conceal sepals.

Corollas to 8 cm. long.

Generic name: see **C. arvensis**. Specific epithet Lat., "of hedges".

CUSCUTA Dodder

W 7-10

Genus of non-green plants, entirely parasitic, each species with definite hosts, the hosts thus being one way to identify them; ten species in the state, most of which are found in our area.

Generic identification readily made: if you see a non-green, yellowish to reddish stemmed, leafless plant twining around the stem of a green plant, it is dodder; this common name derives from German word for "egg-yolk" and refers either to color of stem or to flowers of some species.

CONVOLVULACEAE

IPOMOEA Morning Glory

Twining vines.

Leaves broad, cordate or lobed at base; petioled.

Corolla showy; exceeds stamens and single, expanded stigma; stigma entire to 3-lobed; peduncle without bracts, or these inconspicuous.

Generic name Gr. "resembling a worm", refers to twining habit.

1 Stems and leaves somewhat hairy; sepals drawn out into long linear tips, corolla sky-blue when fresh, changing to pink or purple; stigma 3-lobed . . . **I. hederacea**

1' Leaves and stems glabrous or nearly so; sepals not drawn out into long linear tips; corolla white or pinkish; stigma with or without 2 lobes

2 Corolla white and 7-10 cm. broad with purple in the tube . . . **I. pandurata**

2' Corolla white and 1-2 cm. broad with white tube . . . **I. lacunosa**

IPOMOEA HEDERACEA Ivy-leaf Morning Glory

B or W 7-10

Cultivated ground, roadsides, waste places.

Stems somewhat hairy, twining, to 2 m. long.

Leaves hairy, cordate at base, usually deeply 3-lobed.

Peduncles of 1-3 flowers shorter than or equalling petioles of leaves; both hairy

Flowers, purple to blue, sometimes white, sepals with long, tapering tips (often recurved); stigma 3-lobed; corolla to 4.5 cm. long.

Both specific epithet and common name refer to leaf shape.

IPOMOEA LACUNOSA Small White Morning Glory

W or P 7-10

Various moist areas.

Stems slender, twining, glabrous or slightly hairy, to 3 m. long.

Leaves thin, deeply cordate.

Peduncles of 1-5 flowers usually shorter than subtending leaves.

Corolla to 2 cm. long; usually white or purplish; sepals lance-shaped, short-pointed; hairy margined.

IPOMOEA PANDURATA Wild Potato Vine or Man of the Earth W 5-9

Habitat varies from low, waste areas to dry fields; often a troublesome weed.

Trailing or twining herbaceous vine; glabrous or nearly so; strong; freely forking; to 5 m. long.

Leaves alternate, cordate; midrib, petioles and margins often purplish.

Peduncles stout, stiff, bearing terminal cluster of 1-7 flowers; usually longer than subtending leaves.

Flowers white, often with pink stripes radiating from center, or purple blotches in center; corolla to 8 cm. long; stigma 2-lobed or entire (both stigma and coloring help differentiate this species from the otherwise quite similar **Convolvulus sepium**, which see).

Like another species of this genus, from which come our sweet potatoes, **I. pandurata** grows from large (to 30 lbs.!) underground parts; hence both common names, the latter referring to fact that the tuber is often forked, like the human body; these tubers are purgative and not recommended for eating, although Indians are said to have done so.

CORNACEAE Dogwood Family

Woody plants with usually opposite, always simple, petioled, entire or few-toothed leaves.

Flowers usually perfect, small regular and epigynous.

Family name from Lat., "horn", alluding to hardness of wood.

CORNUS Dogwood

All small trees or shrubs in our area.

Leaves opposite (except in 1 species), entire.

Flowers perfect, 4-merous, epigynous, with 1 style.

Common name from Old English, "dag," to pierce or stab, as in "dagger"; such implements were made from the very hard wood of plants of this genus.

1 Leaves alternate, but so crowded as often to appear whorled; most petioles 2-6 cm. long . . . **C. alternifolia**

1' Leaves opposite; petioles under 2.5 cm. long

2 Flower cluster surrounded by petal-like bracts . . . **C. florida**

2' Flowers in open inflorescence, not surrounded as above

3 Lower leaf surface woolly, with hairs over .5 mm. long; upper usually rough . . . **C. drummondii**

3' Lower leaf surface grayish, with minute, closely appressed hairs; upper always smooth

CORNUS Dogwood (con't.)

4 Youngest twigs densely hairy, older twigs reddish-brown; branches of inflorescence yellow-brown . . . **C. obliqua**

4' Youngest twigs glabrous or sparsely hairy, older branches gray; branches of inflorescence red . . . **C. racemosa**

CORNUS ALTERNIFOLIA Alternate-leaved Dogwood or Green Osier Dogwood

W 5-6

Rich, steep, north-facing bluffs or slopes.

Shrub or small tree, to 8 m. tall; young twigs greenish.

Leaves thin, abruptly pointed, pale green on lower surface; clustered towards ends of branches; petioles of very varied lengths, from 8-60 mm. on same branch.

Inflorescence often arched.

Specific epithet and first common name refer to leaf position; second common name to color of twigs.

CORNUS DRUMMONDII Rough-leaved Dogwood

W 5-6

Rocky woods, limestone glades, but occasionally found in moist areas; survives in dryer and more exposed areas than other Missouri species; next most common to **C. florida.**

Shrub or small tree to 15 m. tall; branches grayish.

Leaves with prolonged tips, usually (but not always) rough on upper surface; woolly with long hairs on lower surface.

Inflorescence flat or convex.

CORNUS FLORIDA Flowering Dogwood

W 3-5

Most often on upland, acid soils; our most common and showy species.

Understory tree, with branches upcurved at tips; to 12 m. tall; twigs greenish.

Leaves opposite, tapering or rounded at base, short-petioled; dark green above, pale and glabrous or silky on lower surface.

Tiny flowers yellowish, in clusters of 20-30 surrounded by 4 usually white (rarely pink) petal-like bracts, which make the plant showy; buds of inflorescence conspicuous throughout the winter.

CORNUS OBLIQUA Swamp, Pale or Silky Dogwood

W 5-7

Wet areas such as swamps, or damp thickets.

Shrub to about 3 m.; young twigs densely hairy; older reddish-brown.

Leaves opposite, tapering at both ends; whitish or glaucous on lower surface, with appressed white hairs.

Inflorescence convex, broader than high, its branches yellow-brown.

CORNUS RACEMOSA Gray Dogwood

W 5-7

Moist soil, woods, thickets, roadsides; blooms as very young plant, and earlier than any other Missouri species.

Shrub to 3 m. tall; branches slender, gray, glabrous; often forms thickets.

Leaves long-pointed, tapering to short petioles; glaucous below, with very short hairs.

Inflorescence as high as broad (or nearly so), open and with bright red branches.

Petals recurving; 3-4 mm. long.

CUCURBITACEAE Gourd Family

Coarse climbing or clambering herbaceous vines, usually with spirally coiled tendrils.

Leaves alternate, simple, often palmately lobed and veined; rough, long-petioled, no stipules.

Flowers usually unisexual, regular, large, axillary; the staminate with (usually) 3 stamens twisted and somewhat united; the pistillate epigynous with united styles and a thick stigma.

CUCURBITA FOETIDISSIMA Missouri Gourd or Wild Pumpkin

Y 6-7

Roadsides, fields, waste areas.

Stems rough, trailing, often several meters long; monoecious plants, with forked tendrils.

Leaves more or less triangular, rough on both sides, finely toothed.

Large yellow flowers solitary, unisexual; corolla deeply 5-lobed, the lobes recurved at tips; male flowers with 3 stamens, their anthers twisted and united; pistillate with 1 short style, 3 stigmas.

Specific epithet alludes to fact that whole plant has offensive odor, when bruised.

SICYOS ANGULATUS One-seeded Bur Cucumber

W 7-10

Low, wet areas.

Vine, sometimes climbing several meters by 3-forked tendrils, stem angled, sticky-hairy.

Leaves shallowly 5 lobed (reminiscent of maple leaves), rough, serrate.

Staminate flowers clustered at tips of long stalks; pistillate at tips of shorter stalks; these and tendrils all axillary; stamens and anthers united in column, style slender and short, with 3 stigmas

Specific epithet from angled stem, common name from clumped, hairy, spiny fruits, each yellowish, dry and about .7 cm long.

DIOSCOREACEAE Yam Family

Herbaceous, twining vines; usually dioecious.

Leaves cordate, with palmate venation; alternate, simple.

Flowers small, regular; 6-parted perianth petaloid and joined below; pistillate flowers with 3 styles, each with blunt stigma.

G 4-6

DIOSCOREA VILLOSA Yam

Rich or rocky, usually lowland, woods.

Twining, climbing herbaceous vine, to 5 m. long; dioecious; glabrous.

Leaves alternate, simple, cordate at base, palmately veined; lowest 3 sometimes whorled; shiny; usually short-hairy on veins of lower surface.

Staminate inflorescence widely branched, with 1-4 flowers at each node; pistillate inflorescence on spike to 10 cm. long, with 5-10 solitary flowers.

Common name misleading as we in U.S. market as yams the sweet potato, **Ipomosa batatas** (Convolvulaceae; see above for local species) an unrelated plant. The edible yams of other parts of the world do, however, come from the underground, fleshy stem of another sepcies of this genus; as far as we know the underground parts of **D. villosa** have only been used medicinally.

DIPSACACEAE Teasel Family

Herbaceous plants.

Leaves opposite, without stipules.

Flowers very small, perfect, at least somewhat irregular, each flower subtended by 2 tiny, fused bracts; the crowded inflorescence subtended by many-leaved involucre.

Common name for early use of the fruiting head to "tease" the nap on woollen cloth, or to card wool before spinning.

DIPSACUS SYLVESTRIS*

P 6-10

Naturalized weed of open areas.

Stem stout, very prickly, little branched, if at all; to 1.5 m. tall.

Leaves opposite, the upper pairs clasping the stem; prickly on mid-vein of lower surface, and often on the margin.

Tiny tubular flowers massed on ovoid receptacle; beneath each is long-pointed bract, making the head resemble that of a thistle.

Beneath inflorescence is whorl (involucre) of slender, prickly, leaf-like parts, often longer than head is tall.

EBENACEAE Ebony Family

Trees.

Leaves alternate, entire, without stipules, often leathery.

Plants dioecious, or with perfect flowers on same trees as the pistillate and staminate.

DIOSPYROS VIRGINIANA Persimmon

Y 5-6

Open woods, glades, borders, prairies, etc.; often spreading by roots, and forming thickets; bark very dark and deeply dissected into oblong blocks.

Trees with very hard, blackish wood; to 45 m. tall.

Leaves simple, entire, alternate; dark green on upper surface, lighter below.

Flowers 4-merous, the pistillate larger, usually with 8 sterile anthers; the staminate with 16 fertile anthers.

Fruit technically a large berry, the familiar persimmon.

Generic name Gr. "grain of Jove", presumably referring to the fruit of some species.

ERICACEAE Heath Family

Woody plants, often found in acid soil.

Leaves simple, without stipules and often leathery.

Flowers often urn-shaped, regular or nearly so, perfect.

1 Flowers large, at least 30 mm. long, very showy . . . **Rhododendron**

1 Flowers smaller, less than 15 mm. long, usually nodding and bell-shaped . . . **Vaccinium**

RHODEDENDRON ROSEUM Azalea

P-W 4-5

Acid soil on steep, wooded, north-facing slopes, found only in 2 counties of our area, and even in these (St. Francois and Ste. Genevieve) the plant is rare.

Shrub branched above; twigs somewhat hairy, leaves clustered near their tips; to 3 m. tall.

Leaves thin, with hairy margins; grayish hairy on lower surface, slightly hairy on upper.

Flowers spectacular, at least 30 mm. long, 40-50 mm. broad with 5 protruding stamens; opening with the leaves; very fragrant.

VACCINIUM Blueberry

This is a very variable genus, with 3 species in our area, all woody.

1 Leaves mostly rounded, blunt, or very short-pointed at tip; leathery, thick and firm, with dark green upper surface; to 9 m. tall . . . **V. arboreum**

1' Leaves mostly short- to long-pointed at tip, pale green on upper surface; plants to 3 m. tall.

2 Flowers broadly bell-shaped, wider than long, with protruding anthers; small bract at base of each flower . . . **V. stamineum**

2' Flowers barrel-shaped to cylindrical, longer than broad; anthers not protruding; no bracts at base of each flower . . . **V. vacillans**

ERICACEAE

VACCINIUM ARBOREUM Farkleberry or Sparkleberry

W 5-6

Usually in rocky, open woods or upland slopes, with acid soil.

Coarse, wide-branching shrub, to 9 m. tall.

Leaves firm, narrowed to short petiole, glabrous and shiny on upper surface, dull green and sometimes slightly hairy below.

Flowers in loose, leafy-bracted raceme, the corolla lobes short and reflexed; on jointed pedicels, 5-15 mm. long.

Specific epithet denotes plants' sometimes tree-like habit; 2nd common name refers to shiny black berry they produce.

VACCINIUM STAMINEUM Deerberry or High Bush Huckleberry

W 4-6

Usually in rocky, open, dry woods, or on ridges, glades, etc., in acid soil.

Slender branched, shrubby plant with hairy twigs; to 3 m. tall.

Leaves pointed, entire, pale on lower surface; hairy on both sides, especially along mid-vein; petioles 2-3 mm. long.

Flowers wider than broad; pendulous, on thread-like pedicels, at base of which are small bracts; corolla lobes prominent and spreading, the stamens protruding distinctly beyond them.

Specific epithet refers to prominent stamens; 1st common name to fact that berries are popular with white-tailed deer; 2nd to the fact that this species is generally taller than the next.

VACCINIUM VACILLANS Low Bush Huckleberry or Low Bush Blueberry

G-P 4-5

Low shrub to 9 dm. tall; glabrous, with stiff green or brown tinged branches.

Leaves very variable, but usually some are blunt-tipped, glabrous and/or glaucous; usually entire.

Flowers urn-shaped, longer than broad; on pedicels 2-7 mm. long, with no bracts at their base.

Specific epithet translates as "vacillating", a term that could be well applied to the common names used for this group of plants.
The term "huckleberry" is more commonly applied to plants of the genus **Gaylussacia**,

VACCINIUM VACILLANS **Low Bush Huckleberry or Low Bush Blueberry** (con't.)

not found in our area, and only very rarely in the state; **V. vacillans** is the tastiest blueberry in our area, but is not one of the species **V. corymbosum** and **V. angustifolium**, commonly gathered and eaten in the northern and eastern states.

EUPHORBIACEAE Spurge Family

Herbaceous plants, in our area, often with milky sap.

Leaves usually alternate, stipulate.

Flowers extremely simple; imperfect, incomplete, hypogynous.

1 Plants with milky sap; cup-shaped involucre surrounds both male and female flowers, replacing individual calyces . . . **Euphorbia**

1' Plants without milky sap and involucres; male and female flowers separate, each with a calyx

2 Plants with stellate hairs; calyx of staminate flowers usually 5 parted

3 Inflorescence terminal . . . **Croton**

3' Flowers few and scattered . . . **Crotonopsis**

2' Plants glabrous or with simple hairs; calyx of staminate flowers usually 4-parted . . . **Acalypha**

ACALYPHA **Three-seeded Mercury**

G 6-10

Several species in our area, mostly quite weedy and small; monoecious.

Leaves alternate, petioled and with stipules; sometimes coppery, in mature plants.

Staminate flowers very small, clustered in axillary spike; pistillate few or solitary, at base of same spikes, or separate, surrounded by large, leaf-like, fringed, persistent bract.

Generic name Gr., "nettle", which it much resembles; common name refers to 3-parted capsular fruit, and to "wings" (like those of Mercury!) formed by persistent bract.

EUPHORBIACEAE

G 5-10

CROTON

Several species of this small weedy plant, in our area; freely branched and usually strong-scented; often grayish from many branched hairs; those in our area monoecious.

Lower leaves alternate, but upper sometimes opposite or whorled.

Pistillate flowers usually at base of staminate cluster; the terminal inflorescence often appears to be axillary, as branches lengthen beyond them.

G 6-9

CROTONOPSIS Rushfoil

Plants of acid soil, in rocky glades or woods, sandy fields, etc.

Stem slender, usually much-branched; to 4 dm. tall.

Lower leaves alternate, upper opposite; soft-hairy above with star-shaped hairs.

Minute male flowers above, female below, usually in scattered clusters.

Generic name simply means that this plant looks a lot like **Croton,** as you will learn, if you attempt to differentiate between them.

EUPHORBIA Spurge

Plants containing poisonous, milky sap.

Flowers very much reduced, the staminate consisting of a single stamen, the pistillate of a single pistil; in leafy, cup-like involucre several male flowers surround 1 female, in a stalked inflorescence, the whole appearing to be a single flower (cf. poinsettia, a member of the same genus).

Common name of the genus comes from the same base as the word "purge", a physiological effect that leaves no room for doubt, in the mind of the purged, that **Euphorbia** is a genus closely related to **Ricinus**, from which castor oil is made.

1 Main stem leaves alternate

2 Upper leaves often lobed and, like those at base of inflorescence, often red, at least in part . . . **E. heterophylla**

2' Leaves neither reddish nor lobed; entire and somewhat oblong to round; stem topped by several-rayed umbel, with whorl of leaves at its base

EUPHORBIA Spurge (con't.)

3 Inflorescence surrounded by showy, white petal-like bracts; to 10 dm. tall . . . **E. corollata**

3' Inflorescence without such bracts; rarely as tall as 4 dm. . . . **E. commutata**

1' Main leaves of stem mostly opposite

4 Stems rough-hairy, at least above . . . **E. dentata**

4' Stems glabrous or soft-hairy

5 Stems erect; leaves serrate, long-haired at base . . . **E. maculata**

5' Stems mainly prostrate; reddish or brown-hairy; leaves dull green, often with reddish spot; common weed in sidewalk cracks . . . **E. supina**

G 3-6

EUPHORBIA COMMUTATA Wood Spurge

Woodlands, mostly in moist areas.

Glabrous plant; stems branched from the base; to 4 dm. tall.

Leaves numerous, entire, the upper all sessile; leaves subtending umbel often joined at base; umbel 3-forked.

W 5-10

EUPHORBIA COROLLATA Flowering Spurge

Prairies, glades, rocky ledges, open woods, waste areas.

Smooth, leafy plant, usually unbranched below; to 10 dm. tall.

Leaves alternate, simple, entire, sessile; whorl of leaves subtends inflorescence.

Each group of reduced flowers (see generic description) subtended by white petal-like parts that make the "inflorescence" very showy.

Both the specific epithet and the common name refer to petal-like bracts.

EUPHORBIACEAE

EUPHORBIA DENTATA

G 7-10

Prairies, glades, roadsides, waste areas.

Branched, rough-hairy plant to 1.2 m. tall.

Leaves mostly opposite, toothed, slender-petioled; the upper often pale.

Specific epithet refers to toothed leaves.

EUPHORBIA HETEROPHYLLA Painted Leaf, Fire-on-the-Mountain or Wild Poinsettia

G 7-10

Alluvial soils, thickets, open or rocky woods.

Stems usually branched, glabrous or nearly so; to 1 m. tall.

Leaves alternate, the upper often red-based and lobed; more or less glabrous on both surfaces; very variable.

Specific epithet refers to variability of leaves; the common names to the fact that they can be quite colorful.

EUPHORBIA MACULATA Nodding Spurge

G 5-10

Thickets, fields, pastures, woodlands, roadsides.

Stems erect, or nearly so, usually branched and almost glabrous at maturity; to 1 m. tall.

Leaves opposite, slightly toothed, lower surface long-haired at base; dark green, often with red spot.

Petal-like bracts white, as in **E. corollata**, but minute.

Specific epithet Lat., refers to usual spot on leaves.

EUPHORBIA SUPINA **Milk Purslane**

G 5-10

Sidewalk cracks, roadsides, cultivated or waste, usually dry areas.

Slender, usually prostrate, branching from near base, forming mats to 9 dm. across; young stems somewhat hairy (and this reddish or brown).

Dull green leaves sparsely hairy to almost glabrous, often purple-mottled.

Specific epithet describes habit as "lying on its back"; common name refers to a presumed similarity between this plant and **Portulaca oleracea** (which see.)

FABACEAE **Pea Family** (often called **Leguminosae**)

Leaves alternate, usually compound; stipulate; often replaced by tendrils or thorns.

Flowers usually irregular, 5-merous; single simple pistil; usually 10 stamens, of which 9 are often united by their filaments.

Extremely large family characterized by distinctive fruit, the legume, of which pea pods and beans are examples; often divided into 3 sub-families.

1 Flowers regular; stamens much longer than perianth; stamens 5 to many . . . **Mimosoideae**

1' Flowers usually irregular; stamens 10 or fewer, usually not protruding

2 Upper petal enclosed by the 2 wing petal in bud; stamens usually distinct . . . **Caesalpinioideae**

2' Upper petal larger than and enclosing the other petal in bud; most of the stamens usually united by filaments . . . **Fabiodeae**

Subfamily Mimosoideae: Herbs, in our area.

Leaves twice-pinnate.

Inflorescence characteristically a dense head of small flowers.

Flowers regular, the corolla often cup-shaped; 5-10 stamens, protruding beyond the perianth.

Genera included herein: **Desmanthus, Schrankia**

Subfamily Caesalpinioideae: Trees, shurbs, or herbs.

Leaves simple or compound.

Flowers usually somewhat irregular; 10 or fewer stamens, not protruding; usually separate.

Genera included herein: **Cassia, Cercis**

Subfamily III. Faboideae

FABACEAE

FABACEAE Pea Family (con't.)

Except **Amorpha,** all plants included under this heading are herbaceous.

Leaves once compound.

Typical flower of this group is the garden sweet pea, botanically described as "papilionaceous", referring, by a broad stretch of the imagination, to the shape of a butterfly. Irregular flowers have 5 petals, the upper (the "standard") is usually reflexed and always the largest; 2 lateral wings are outside the 2 lowest petals, which are often joined in a keel. Except in **Amorpha** and **Petalostemon** these enclose the typically 10 stamens and the style.

1 Plants woody

2 Leaves odd-pinnate . . . **Amorpha**

2' Leaves simple . . . **Cercis**

1' Plants herbaceous

3 Leaves simple . . . **Crotalaria**

3' Leaves compound

4 Leaves palmately compound, with 5 leaflets . . . **Psoralea**

4' Leaves once or twice pinnately compound or trifoliolate

5 Leaves twice compound

6 Stems, petioles and peduncles with hooked bristles . . . **Schrankia**

6 Not as above, only stipules prickly . . . **Desmanthus**

5' Leaves once compound

7 Leaflets all in pairs

8 Some or all leaves terminating in tendrils; wings joined to keel; style with terminal tuft of hairs . . . **Vicia**

8' No leaves terminating in tendrils: corolla regular . . . **Cassia**

7' Leaves terminating in an unpaired leaflet

Leaflets 5 or more

10 Leaflets 5-9

11 Climbing vines; dull-colored flowers in loose racemes . . . **Apios**

11' Upright herbs; brightly colored flowers in umbels or spikes

12 Flowers bright yellow, in umbels; stamens 10 . . . **Lotus**

12' Flowers bright rose to white, in spikes; stamens 5 . . . **Petalostemon**

10' Leaflets 11 to many

FABACEAE Pea Family (con't.)

13 Flowers in umbels . . . **Coronilla**

13' Flowers in spikes or racemes

14 Inflorescence dense, elongate spikes of numerous tiny flowers; stamens 5 . . . **Petalostemon**

14' Inflorescence racemose

15 Inflorescence terminal . . . **Tephrosia**

15' Inflorescence axillary . . . **Astragalus**

9' Leaflets 3

16 Leaflets toothed

17 Flowers in elongate racemes . . . **Melilotus**

17' Flowers in heads or spikes

18 Stipules entire . . . **Trifolium**

18' Stipules usually toothed . . . **Medicago**

16' Leaflets entire

19 Foliage with a few glandular dots . . . **Psoralea**

19' Foliage without glandular dots

20 Flowers 2 or more cm. long

21 Flowers 2-3 cm. long; in racemes . . . **Baptisia**

21' Flowers 4-6 cm. long; solitary, or in small clusters on axillary peduncles . . . **Clitoria**

20' Flowers 1.6 cm. or less long

22 Leaflets not stipellate

23 Flowers yellow; less than 1 cm. long; stipules united to petiole, and sheathing stem . . . **Stylosanthes**

23' Flowers purple to white, with purple markings; upper leaves trifoliolate

24 Inflorescence a globe-shaped head . . . **Trifolium**

24' Inflorescence spicate, racemose or solitary . . . **Lespedeza**

22' Leaflets with stipels

25 Calyx 2-lipped . . . **Desmodium**

25' Calyx more or less regular; 4-parted

26 Calyx subtended by 2 small bracts . . . **Strophostyles**

26' Calyx not subtended by bracts . . . **Amphicarpa**

AMORPHA CANESCENS Lead Plant

P-V 5-8

Prairies, glades, open woods; usually in *dry soil.*

Shrubby plant, usually *densely gray-hairy;* to 10 dm. tall.

Leaves odd-pinnate, *with 15-25 pairs of rounded leaflets, these rarely more than 17 mm. long.*

Inflorescence: crowded, terminal racemes.

Flower: corolla reduced to a single petal (the standard); yellow stamens protrude.

Generic name Gr., "deformed", refers to absence of 4 petals; specific epithet to gray-hairiness; common name to fact that presence of these plants above ground was once thought to indicate the presence of lead below.

AMORPHA FRUTICOSA False Indigo

P-V 5-6

Moist, low areas.

Branching, shrubby plant to 4 m. tall.

Leaves odd-pinate with *5-13 pairs of rounded leaflets, these usually 20-40 mm. long.*

Inflorescence: 1-several crowded terminal racemes; showy.

Flower: corolla reduced to single petal (the standard).

Generic name: see above; specific epithet Lat., "shrubby"; common name probably refers to similarity of plant to the related **Indigofera,** a genus not native to our area.

AMPHICARPA BRACTEATA Hog Peanut

W or P-V 8-9

Woods and thickets.

Low, slender, twining plant, the stem covered with brownish hairs.

Leaves pinnately trifoliolate, the leaflets entire, stipelled; long petioled.

Inflorescence: nodding, usually simple, raceme with 2-15 flowers, the pedicel of each with a bract at its base.

Flowers of 2 kinds: normally petal-bearing flowers on upper racemes, flowers nearly or completely without petals near base of the stem.

AMPHICARPA BRACTEATA Hog Peanut (con't.)

Generic name from Gr., "both kinds of fruit"
referring to 2 sorts of pod formed by 2 sorts of flower; specific epithet refers to bracts at base of pedicels, common name to the fact that flowers at base of stem often fruit below the ground, just as do common peanuts.

APIOS AMERICANA Groundnut

P-B 6-9

Moist areas.

Twining or clambering herbaceous plant.

Leaflets 5-9, glabrous to short-hairy on lower surface.

Inflorescence: crowded, short, with as many as 30 flowers, which open sequentially.

Flowers 10-13 mm. long; fragrant.

Generic name Gr., "pear", for shape of underground enlargements on rootstock; common name from fact that these are edible, when cooked.

ASTRAGALUS Milk Vetch

Hebaceous plants.

Leaves compound, with many pairs of leaflets, and a single, terminal leaflet.

Inflorescence: axillary racemes.

1 Plants 6-15 dm. tall; 30-70 yellow to white flowers per inflorescence . . . **A. canadensis**

1' Plants 0.5-5 dm. tall; 3-25 flowers per inflorescence

2 Flowers yellowish or cream-colored; petals lilac or blue at tip; 15-25 mm. long . . . **A. mexicanus**

2' Flowers mostly purplish, lilac, or bluish-lavender; 9-11 mm. long . . . **A. distortus**

ASTRAGALUS CANADENSIS Rattle Weed or Milk Vetch

Y-W 5-8

Open areas or thickets.

Coarse, erect plant, the stem slightly hairy or glabrous; to 1.5 m. tall.

Leaves petioled, their stipules joined; leaflets 13-19, usually glabrous above, somewhat hairy on lower surface.

Inflorescence: axillary racemes on peduncles 5-12 cm. long; raceme at least as long as subtending leaf.

Flowers spreading or somewhat reflexed when open.

Common names from sound produced by mature seeds in dry, ripened pods, and from ancient belief that this plant, grazed by cattle, would increase the flow of milk.

ASTRAGALUS DISTORTUS Bent Milk Vetch

P-V 5-6

Dry open woods and prairies.

Glabrous stems in clusters to 4.5 cm. tall.

Leaves 5-13 cm. long; 11-25 glabrous oblong leaflets up to 1 cm. long.

Compact raceme 2-3 cm. long.

Corolla lilac purple; 1 cm. long.

Specific epithet refers to twisted legumes.

ASTRAGALUS MEXICANUS Ground Plum

B-W 3-5

Rocky, open areas; prairies, glades, etc.

Plant branching at the base, commonly with several stems, sparsely hairy; to 5 dm. tall.

Leaves petioled; leaflets 15-23, appressed hairy on both sides or glabrous above.

Inflorescence: rather densely flowered axillary racemes.

Flowers: calyx tube densely soft-hairy; petals often blue-tipped.

ASTRAGALUS MEXICANUS Ground Plum (con't.)

Common name from roundish, glabrous pod, 2-3 cm. in diameter; these are said to be edible, either raw or cooked . . . but one should probably not feast on them, as closely related plants, the locoweeds of the West, are very poisonous.

BAPTISIA Wild Indigo

Herbaceous plants, usually much branched, the lateral branches often exceeding the central in length.

Leaves commonly palmately trifoliolate.

Inflorescence: terminal racemes of usually showy flowers.

Generic name Gr., "to dye", from economic use of some species; common name refers to same.

1 Flowers blue; stipules longer than petioles . . . **B. australis**

1' Flowers white or cream; stipules shorter than petioles

2 Plants glabrous; stipules deciduous . . . **B. leucantha**

2' Plants usually soft-hairy; stipules persistent . . . **B. leucophaea**

BAPTISIA AUSTRALIS Blue False Indigo

B 4-6

Alkaline glades and prairies.

Smooth, stout plant, to 1.6 m. tall.

Leaves slender-petioled, the persistent, lanceolate stipules longer than these.

Inflorescence: long, coarse, erect terminal raceme.

Flowers showy; 2-3 cm. long.

Specific epithet Lat., "southern"; plant was originally native only to our southern states, but has since spread from cultivation.

FABACEAE

BAPTISIA LEUCANTHA White or Prairie Wild Indigo

W 5-7

Prairies, glades and other open areas, usually in wet soil.

Widely branched plant, the stem both glabrous and glaucous; to 1.5 m. tall.

Leaves petioled, the leaflets rounded; stipules shorter than petioles and soon deciduous.

Inflorescence: racemes single or few, stout.

Flowers showy; 18-25 mm. long.

Specific epithet Gr., "white".

BAPTISIA LEUCOPHAEA Long-bracted Wild Indigo

Creamy white 4-6

Rocky, dry, open areas; usually in acid soil.

Coarse, soft-hairy plant with spreading branches; to 8 dm. tall.

Leaves nearly sessile; stipules of lower leaves to 4 cm. long, gradually reduced upwards; persistent.

Inflorescence: raceme usually single, more or less bent over, to 3 dm. long; bracts at base of pedicels persistent, to 3 cm. long.

Flowers showy, to 3 cm. long.

Specific epithet Gr., "cream-colored", common name self-explanatory.

CASSIA

Herbaceous plants in our area.

Leaves compound, without terminal leaflet; stipulate and often bearing glands on, or at base of, petioles.

Flowers perfect, nearly regular, 5-merous, with 5 or 10 stamens.

1 Leaflets commonly more than 3 cm. long; not sensitive to touch . . . **C. marilandica**

1' Leaflets commonly less than 2 cm. long; sensitive to touch

2 Flowers showy (petals to 2 cm. long), stamens 10 . . . **C. fasciculata**

2' Flowers small (petals to 8 mm. long), stamens 5 . . . **C. nictitans**

CASSIA FASCICULATA Partridge Pea

Y 6-10

Common species of glades, prairies and other open areas.

Stems soft-hairy, branching; to 9 dm. tall.

Leaflets 2-5 mm. broad, in 10-15 pairs; sensitive; stipules striate and persistent.

Flowers in short, axillary, bracted racemes.

Petals slightly unequal, usually with purple spot at base; to 2 cm. long; 10 stamens of unequal length, 4 often yellow, the others purple.

CASSIA MARILANDICA Wild Senna

Y 6-10

Usually grows in moist areas.

Stem glabrous, or slightly hairy above; to 2 m. tall.

4-8 pairs of leaflets 10-25 mm. broad, 20-80 mm. long; slightly pointed, with projection at tip; stipules deciduous; leaflets not sensitive to touch.

Inflorescence: several axillary racemes, clustered towards tip of stem.

Flowers with petals 10-15 mm. long; stamens 10, the upper 3 without anthers.

Common name notes relationship of this plant to another species of same genus, commonly used as a cathartic.

CASSIA NICTITANS Sensitive Pea

Y 7-9

Usually found in dry, acid soil.

9-20 pairs of leaflets, very sensitive to touch; stipules striate and persistent.

Flowers solitary or clustered, 2-3, in leaf axils.

Petals very unequal, to 8 mm. long; stamens 5 and almost equal.

Specific epithet Lat., "winking" for opening and closing of leaves

FABACEAE

CERCIS CANADENSIS Redbud

P 3-4

Open areas, usually in alkaline soil.

Widely branched small tree (to 12 m. tall), with narrowly-furrowed bark and zig-zag twigs.

Leaves alternate, simple, entire, cordate and petioled.

Flowers appear before leaves, on slender pedicels from branchlets of previous year; the calyx red; stamens 10.

CLITORIA MARIANA Butterfly Pea

B 5-9

Dry, open areas with acid soil.

Glabrous, twining herb, stems to 1 m. long.

Leaves pinnately trifoliolate, the leaflets obtuse and rounded at the base; long-petioled.

Inflorescence: 1-3 flowers clustered on axillary peduncle; the peduncle shorter than petiole of subtending leaf.

Showy pale blue flowers 4-6 cm. long, each closely subtended by a pair of very small bracts; center of standard with purple markings.

Generic name from presumed resemblance of floral keel to the mammalian clitoris.

CORONILLA VARIA* Crown Vetch

P-W 5-8

Waste ground, roadsides (where it is often planted to prevent erosion).

Glabrous, herbaceous plant, spreading by creeping stems; to 5 dm. long

Leaves odd-pinnate, with 15-25 leaflets; sessile.

Inflorescence: 10-15 flowered umbel, on stout peduncle, as long as or longer than subtending leaves; axillary.

Flowers only 10-15 mm. long, but heads are showy.

Generic name Lat., "little crown", refers to inflorescence shape; specific epithet means that plants of the species vary considerably; common name "Vetch" from resemblance to **Vicia** (which see).

Y 5-9

CROTALARIA SAGITTALIS Rattlebox

Prairies, glades and other open areas.

Slender, hairy stem, branched above, to 4 dm. tall.

Hairy leaves simple, alternate, stipulate; the stipules of upper leaves often decurrent, causing the stem to appear winged; sessile or nearly so.

Inflorescence: 2-4 flowered, terminal and axillary racemes.

Flowers 7-10 mm. long, the standard yellow.

Generic name Gr., "rattle", referring, as does common name, to sound of seeds in ripened pod; specific epithet refers to stipules, arrow-shaped and usually conspicuous.

W-G 6-8

DESMANTHUS ILLINOENSIS Prairie Mimosa or Prickle Weed

Rocky, open areas.

Glabrous, bushy plant; stem angled; to 2.5 m. tall.

Leaves twice-pinnate, the leaflets tiny; stipules prickly.

Heads on long, axillary peduncles.

Generic name Gr., "bundle flower", probably refers to curved fruits, often developing in a tight bundle; 1st common name refers to habitat, 2nd to stipules.

W-V 6-10

DESMODIUM Tick Trefoil or Beggar's Ticks

Various open habitats and woods.

Herbaceous plants, at least 10 species of which are fairly common in our area.

Leaves pinnately trifoliolate, stipulate and petiolate; leaflets with stipels, entire.

Inflorescence: axillary or terminal, often paniculately compound, racemes often with hooked hairs.

Flowers small, sometimes marked with yellow, and often becoming greenish with age; calyx 2-lipped.

DESMODIUM Tick Trefoil or Beggar's Ticks (con't.)

Generic name Gr., "chain", refers to single-seeded sections of ripened pod that stick together, as you will find on your jeans during late summer field trips; each link in such chains resembles a tick, thus partly explaining the common names. "Trefoil" refers to the 3 leaflets characteristic of leaves of the genus, but why "beggar's ticks" we do not know.

LESPEDEZA Bush Clover

P-W 5-10

Various open habitats.

Herbaceous plants, at least 8 species of which are fairly common in our area; often hairy.

Inflorescence: spicate, racemose or solitary; axillary; each flower subtended by 2 (or 4) small bracts. Flowers small; calyx about equally 5-toothed. common name misleading as these plants are not bushy, "clover" of course, refers to similarity of these leaves to those of **Trifolium**.

Perhaps the easiest way to tell species of this genus genus from the specie of **Desmodium** is that the **Lespedeza** pod is always a single-seeded fruit.

LOTUS CORNICULATA* Bird's-foot Trefoil

Y 5-9

Waste areas, but also sometimes planted along roadsides.

Many-stemmed, low-growing plant, to 6 dm. tall (or long).

Leaves 5-foliolate (the basal pair of leaflets looking more like stipules); sessile or nearly so; as in clovers (**Trifolium**) terminal leaflet is not stalked.

Inflorescence: head-like umbels on very long, erect peduncles, from upper axils.

Flowers to 14 mm. long.

Generic name confusing, as this little plant is no way similar or related to the so-called

LOTUS CORNICULATA* **Bird's-foot Trefoil** (con't.)

"sacred lotus" of Asia (that latter is pink-flowered and a water-lily of the genus **Nelumbo**); specific epithet, Lat., "horned" may refer to the large basal leaflets as "horns", but we have no authority for this assumption; common name refers to similarity of arrangement of 5 erect pods to a bird's foot, and similarity of the whole plant to the clovers.

MEDICAGO LUPULINA* **Black Medic**

Y 2-12

Grassy lawns, fields, waste areas.

Often lies flat on the ground, the branching stem soft hairy, especially below; to 4 dm. long.

Leaves trifoliolate, the leaflets toothed, as the stipules usually also are; terminal leaflet stalked.

Inflorescence: crowded on slender peduncle usually equal to, or shorter than, subtending leaf.

Flowers to 4 mm. long.

Generic name is that of the valuable forage crop, alfalfa, so-called as it came to the Greeks from Media; specific epithet Lat., "hop-like", refers to inflorescence; first part of common name to fact that the pods are almost black.

MELILOTUS ALBUS* **White Sweet Clover**

W 5-10

Roadsides and waste areas.

Stems to 3 m. tall.

Leaves trifoliolate, the leaflets serrate and terminal leaflet stalked; very similar to those of **Medicago**, but these are fragrant when crushed.

Inflorescence: elongate racemes.

Flowers 5-7 mm. long, *white*.

Generic name Lat., "honey legume", refers to fact that this is important plant in honey production; specific epithet Lat., "white".

MELILOTUS OFFICINALIS* Yellow Sweet Clover

Y 5-10

Roadsides and waste areas.

Stem to 15 dm. tall.

Leaves: see **M. albus.**

Inflorescence: see, **M. albus.**

Flowers to 7 mm. long, *yellow.*

Generic name, see above; specific epithet, Lat., "of the shops", referring to fact that preparations made from this plant were once used in medicine, as well as a seasoning.

PETALOSTEMON CANDIDUM White Prairie Clover

W 5-9

Glades and other rocky, open areas.

Glabrous plant, not much branched, to 6.5 dm. tall.

Leaves glabrous, often with *7 leaflets, these to 5 mm. wide;* petiolate.

Inflorescence: dense, cylindric terminal spikes; each flower subtended by long, pointed, protruding bract; to 10 cm. long; flowers *white.*

Generic name, Gr., refers to a peculiar union of petals and stamens; specific epithet Lat., "shining white".

PETALOSTEMON PURPUREM Purple Prairie Clover

P-V 5-9

Same sort of habitat as **P. candidum.**

Stems (in our area) usually glabrous; to 1 m. tall.

Leaves also usually glabrous; *3-5 leaflets, to only 2 mm. wide;* short-petiolate; smaller leaves often clustered in axils.

Inflorescence: dense, terminal spikes to 5 cm. long, *flowers purple.*

Generic name: see above.

PSORALEA Scurf Pea

Plants (especially the calyx and the fruit) usually covered with glandular dots or points.

Leaves variously compound, mostly with 3-5 leaflets.

Inflorescence: spikes or racemes.

Generic name from Gr., "scabby", referring to glands or dots on parts of most species of the genus; common name refers to same character.

1 Leaves with 3 leaflets

  2 Terminal leaflets not stalked . . . **P. tenuiflora**

  2' Terminal leaflet long – stalked

    3 Principal leaflets 2.5-5 cm. wide; pointed . . . **P. onobrychis**

    3' Principal leaflets less than 2 cm. wide; not pointed . . . **P. psoralioides**

1' Leaves with 5 leaflets, palmately compound

  4 Leaflets commonly more than 1 cm. wide; calyx 6-15 mm. long . . . **P. esculenta**

  4' Leaflets rarely as much as 1 cm. wide; calyx 2-4 mm. long . . . **P. tenuiflora**

B 4-7

PSORALEA ESCULENTA Prairie Turnip

Rocky open areas, usually on alkaline soil.

Stem long-hairy, much-branched, to 4 dm. tall.

Leaves palmate, with 5 leaflets; petioles 5-10 cm. long.

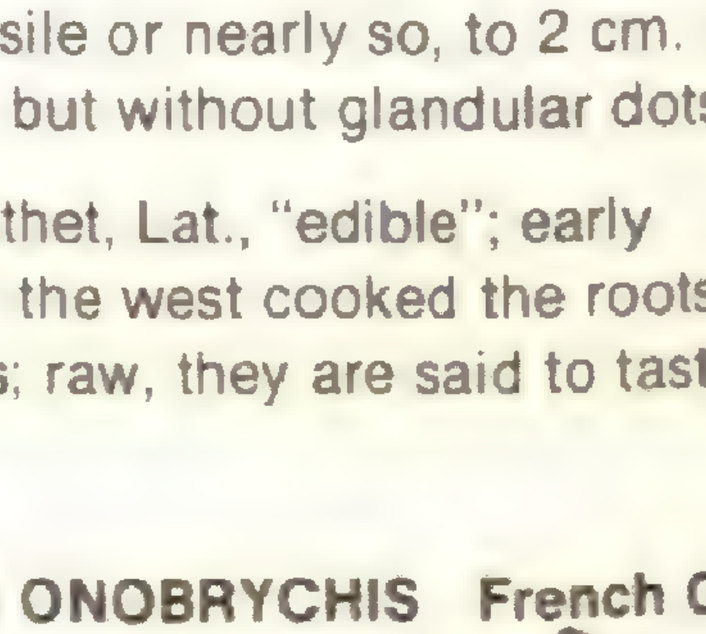
Inflorescence: a dense leafy-bracted spike.

Flowers sessile or nearly so, to 2 cm. long; calyx hairy, but without glandular dots; showy.

Specific epithet, Lat., "edible"; early travellers to the west cooked the roots as substitute for potatoes; raw, they are said to taste like turnips.

B-W 5-9

PSORALEA ONOBRYCHIS French Grass



Rich wooded slopes, or moist low areas.

Nearly hairless and without glands; stem to 1.5 m. tall.

Leaves pinnately trifoliolate, the terminal leaflet on stalk longer than those of other 2; sometimes minutely punctate above.

Peduncles of slender racemes shorter than subtending leaves.

PSORALEA ONOBRYCHIS French Grass (con't.)

Flowers to 7 mm. long, the calyx nearly glabrous or minutely hairy.

Specific epithet, Gr., infers that asses bray for this delicious food.

PSORALEA PSORALIOIDES Sampson's Snakeroot

B 5-7

Rocky, open areas in acid soil.

Slender plant, with simple or sparingly branched stem to 9 dm. tall.

Leaves pinnately trifoliolate, glabrous to thinly hairy; sometimes glandular-punctate.

Inflorescence: dense raceme on peduncle much longer than subtending leaves.

Flowers to 7 mm. long, subtended by deciduous, conspicuously glandular-dotted bracts; calyx more or less hairy.

We have been unable to trace any reference to the reason for the plant's intriguing common name.

PSORALEA TENUIFLORA Few-flower Psoralea

B 5-9

Glades, prairies, etc. in alkaline soil.

Bushy-branched, gray-hairy stems to 1 m. tall.

Leaves palmate, with 3-5 leaflets; nearly glabrous and glandular punctate above, gray hairy below; petiolate.

Inflorescence: racemes not densely crowded, long, slender, on peduncles much longer than the subtending leaves.

Flowers to 5 mm. long, the calyx hairy and glandular-punctate.

Specific epithet Lat., "slender flowered", but apparently to be interpreted as "sparsely" flowered.

SCHRANKIA UNCINATA Sensitive Brier or Cat Claw

P 5-9

Rocky, open areas.

Plant trails along the ground, with hooked prickles on the stems and leaf petioles (if you choose to check this characteristic you will regret it; if any part of this plant catches you or your clothing, it will be difficult to get rid of).

Leaves typical of sub-family, Mimosoideae and in this case "sensitive" as are those of the "sensitive plants" in the genus **Mimosa.**

Round flower heads, on axillary peduncles, very showy.

Specific epithet and common names all refer to hooked prickles.

STROPHOSTYLES Wild Bean

P-W 6-10

3 species found in our area grow in variety of habitats.

Trailing or twining plants.

Leaves trifoliolate, leaflets entire and stipellate; petiolate.

Inflorescence: head-like, a short, long-peduncled raceme.

Flowers small, each subtended at base of calyx by pair of streaked-veined small bracts.

Generic name from Gr., "turned style", refers to upturned corolla, which includes both stamens and style.

STYLOSANTHES BIFLORA Pencil Flower

Y 5-9

Rocky open areas with acid soil.

Stiff, wiry stems, often branched at base, hairy or bristly above; to 5 dm. tall.

Leaves pinnately trifoliolate with narrow leaflets; appearing whorled; mostly crowded at base of inflorescence, their stipules sheathing the stem; short petiolate.

Inflorescence: short, leafy spikes, subtended by bristly bracts with hairy margins; mostly terminal.

Flowers with stalk-like calyx.

STYLOSANTHES BIFLORA Pencil Flower (con't.)

Generic name Gr., "column flower", referring to calyx; common name probably refers to same structure; specific epithet to the inflorescence, often so short that each spike holds only 2 flowers.

TEPHROSIA VIRGINIANA Goat's Rue, Cat Gut, Hoary Pea or Devil's Shoelaces

P or Y-W 5-8

Rocky, open areas with acid soil.

Stem branched from base only, hairy, leafy to the top, to 6 dm. tall.

Leaves odd-pinnate, with about 21 leaflets; long, silky-hairy.

Inflorescence: usually a single, terminal raceme; dense.

Flowers showy and numerous, the standards yellow, the wings pinkish.

Generic name Gr., "grayish white-hairy", to which one common name also refers; "goat's rue" probably derives from early belief that nanny-goats fed on this plant produced more milk; "cat gut" and "devil's shoelaces" perhaps due to tough, fibrous root system that makes plant valuable in areas subject to erosion.

TRIFOLIUM Clover

Herbaceous plants.

Leaves trifoliolate, mostly palmately so, with toothed leaflets; stipule united with the petiole.

Inflorescence of small flowers in heads, spikes, racemes or umbels.

Generic name, Lat., "3-leafed", refers to leaflets.

1 Stalk of terminal leaflet much longer than others; flowers yellow . . . **T. campestre**

1' Terminal leaflet sessile, or with stalk no longer than that of others; flowers not yellow

2 Stems hairy

3 Individual flowers of inflorescence with stalks at least 2 mm. long . . . **T. reflexum**

3' Individual flowers of inflorescence sessile, or with stalks no longer than 1 mm. . . . **T. pratense**

2' Stems glabrous, or essentially so; creeping . . . **T. repens**

Y 4-9

TRIFOLIUM CAMPESTRE* Large Hop Clover

Rocky, open areas.

Hairy, much-branched stems, to 4 dm. tall.

Terminal leaflet distinctly stalked; laterals sessile, or nearly so; leaf petiole to 12 mm. long.

Inflorescence nearly globose, compact, with 15-40 flowers.

Flowers 3-4 mm. long.

Specific epithet Lat., "of open country", common name presumes similarity of inflorescence to that of "hops".

P 5-9

TRIFOLIUM PRATENSE* Red Clover

Fields, meadows, etc.; usually in clumps.

Stem erect, sparsely to densely hairy, to 8 dm. tall.

Leaves: terminal leaflet sessile or its stalk no longer than those of others; the lower leaves long-petioled, becoming shorter upwards; whitish markings on each leaflet.

Inflorescence round or nearly so, densely flowered, sessile or on peduncle no longer than 2 cm.; subtended by pair of sessile involucral leaves.

Flowers: sessile, 13-20 mm. long, fragrant.

Specific epithet Lat., "of meadows".

P-W 5-8

TRIFOLIUM REFLEXUM Buffalo Clover

Rocky or open woods, glades, prairies; usually in acid soil.

Upright plant, branching from base, hairy above, to 5 dm. tall.

Leaves long-petiolate, the leaflets sessile and conspicuously toothed; the petioles hairy.

Inflorescence: globose, on stout peduncles.

Flowers on hairy pedicels that recurve in age; 10-13 mm. long.

Specific epithet Lat., "bent back", refers to slender pedicels; common name indicates that this was a forage crop for buffalo; it is native to our plains, and is the only native clover herein discussed.

TRIFOLIUM REPENS* **White Clover**

W 4-10

Lawns, fields and other open areas; one of world's most widespread plants.

Smooth, creeping stems, long and rooting at the nodes.

Leaves long-petiolate, the leaflets sessile, slightly toothed.

Inflorescence: globose, long-peduncled and without subtending involucre.

Flowers to 11 mm. long, the pedicels long, and elongating further, as well as recurving, in age.

Specific epithet Lat., "creeping".

VICIA **Vetch**

B-W 4-10

Trailing plants of open areas; several species, but none too common in our area; Steyermark lists 5 native, 7 introduced species in Missouri.

Leaves pinnate. subtended by small stipules, and terminated by tendril which replaces terminal leaflet.

Inflorescence axillary.

Generic name Lat., "to bind or twist" as the tendrils effectively do.

FUMARIACEAE **Fumitory Family**

Delicate, herbaceous plants with watery juice; glabrous.

Leaves alternate, much dissected.

Inflorescence racemose or panicled.

Flowers perfect, 2-merous, hypogynous, irregular; 2-sepals, soon deciduous, 2 outer petals joined below, one or both enlarged below; 2 inner petals slender below, expanded above, and joining over the stigma.

CORYDALIS FLAVULA Pale Corydalis

Y 3-4

Rich, moist soil, often low areas.

Delicate plant, leafy stemmed, much branched, to 4 dm. tall.

Leaves twice pinnate, alternate, bluish-green, the lower long-petiolate.

Inflorescence: few flowers in short racemes; flowers on short pedicels, subtended by leafy bracts.

Corolla with toothed, and soon deciduous, spur, to 2 mm. long and incurved; flower to 8 mm. long.

Generic name Gr., "crested lark", refers to spurred corolla; specific epithet Lat., "yellowish".

DICENTRA CANADENSIS Squirrel Corn

W 4-5

Rich, north-facing slopes.

Peduncles to 3 dm. tall.

Leaves all basal, gray-green, finely dissected, long petioled.

Inflorescence: terminal raceme of 3-12 nodding, white flowers.

Corolla heart-shaped at base, the spurs short, rounded and not widely separated, shorter than pedicels; fragrant.

Generic name: Gr., "2-spurred"; common name from thickened, yellow tubers that somewhat resemble corn.

DICENTRA CUCULLARIA Dutchman's Breeches

W 3-4

Rich or rocky woods, ravines, etc.

Delicate herb, the leafless peduncle to 3 dm. tall.

Leaves all basal, gray-green, finely dissected, long-petiolate.

Inflorescence: terminal raceme of 3-12 nodding flowers.

Flowers on arching stalk; *corolla with V-shaped base, the spurs spreading,* pointed and larger than pedicel; flowers tipped with yellow, fragrant.

Generic name: see **D. canadensis;** specific epithet Lat., "hooded".

GENTIANACEAE Gentian Family

Herbaceous plants; glabrous, or nearly so.

Leaves often opposite; simple; entire; sessile; exstipulate.

Flowers regular, perfect, 4-5-merous, hypogynous; stamens as many as lobes of tubular corolla.

1 Leaves in whorls of mostly 4's; stems to 2.5 m. tall . . . **Swertia**

1' Leaves opposite; stems no taller than 8 dm.

2 Corolla lobes much longer than the tube; at least upper part of stems and branches conspicuously 4-angled . . . **Sabatia**

2' Corolla lobes shorter than or equalling the tube; stems and branches round . . . **Gentiana**

GENTIANA PUBERULENTA Downy Gentian

P-V 9-11

Dry, upland prairies, rocky areas.

Slender stems, 1 to several, minutely hairy, to 5 dm. tall.

Leaves: 13-19 pairs; lanceolate; firm; usually with only 1 main vein.

Inflorescence: dense clusters, terminal and usually also axillary.

Flowers: 5-merous; fringed or toothed petal-like parts between the *spreading lobes of corolla; corolla to 5 cm. long.*

Specific epithet and common name refer to same character.

GENTIANA QUINQUEFOLIA Stiff Gentian

V 8-11

Moist, rocky areas.

Stems stiff; round, but 4-ridged; to 8 dm. tall.

Leaves: 4-15 pairs, broadly ovate, clasping the stem with their bases; thin; 3-7 veins prominent on lower surface.

Inflorescence: dense clusters, both terminal and on short, axillary branches.

Flowers 5-merous, *corolla lobes not as spreading; corolla to 25 mm. long.*

Specific epithet Lat., "5 leaves" may refer, however, to fact that flowers are often in clusters of 5.

SABATIA ANGULARIS **Rose Pink or Rose Gentian**

P 6-9

Rocky, open woods; glades, etc., usually in acid soil.

Stem strongly 4-angled; stout; usually branched above middle; to 8 dm. tall.

Leaves thin, soft, more or less translucent; opposite; at least the upper clasping the stem; 3-7 veined.

Inflorescence: flowers solitary or in long-pedicelled terminal cyme.

Flowers: very showy, the lobes of corolla tube to 20 mm. long, the calyx lobes (to 15 mm. long) showing between them, and basal section of corolla, green-to-yellow, giving the whole the appearance of a star; fragrant.

Specific epithet, Lat., "angled", refers to stem.

SWERTIA CAROLINIENSIS **American Columbo**

G 5-6

Grows in a variety of habitats, usually in acid soil.

Stout stem, sometimes very tall (to 2 m.) and usually unbranched.

Leaves in whorls, usually of 4's; the lower leaves to 4 dm. long, the upper becoming progressively smaller.

Inflorescence: large and long terminal cymes.

Flowers 4-merous, the greenish-yellow corolla dotted with purple, and each lobe with a large, round, fringed gland just below its middle.

GERANIACEAE Geranium Family

Herbaceous in our area.

Leaves usually opposite, stipulate.

Flowers: perfect, 5-merous, usually regular, the petals fading or falling very soon; 10 stamens; the long, united styles joined in such a way as to explain common name of Geranium, "crane's-bill".

Family name from Gr., "crane" (see above, under "Flowers").

P 5-7

GERANIUM CAROLINIANUM

Open ground, fields, waste places; a weedy plant.

Several stems from base, bushy-branched, hairy; to 8 dm. tall.

Leaves all petiolate, deeply cut into 5-9 palmate segments; pale or dull green.

Inflorescence peduncled, 4-12 small flowers in terminal corymb.

Flowers: typical family characters, the *petals equalling or shorter than the sepals (less than 1 cm. long)*, far from showy.

Generic name: see family name.

GERANIUM MACULATUM Wild Geranium or Spotted Crane's-bill

P 4-6

Woodland plant.

Stem hairy, naked except for 2 short-petiolate leaves, just below inflorescence; to 6 dm. tall.

Leaves from base as well as on stem deeply 5-7 palmately lobed, the former long-petiolate; dark green.

Inflorescence: terminal corymb of few to several showy flowers.

Flowers: typical familial characters, *petals much exceeding the calyx (more than 1 cm. long); very showy.*

Generic name: see family name; specific epithet Lat., "mottled", as the leaves sometimes are.

HAMAMELIDACEAE Witch Hazel Family

All woody plants.

Leaves alternate, simple, stipulate (but these soon fall).

Flowers 4-merous; usually 8 stamens, 4 fertile, two others not; ovary half inferior.

HAMAMELIS VERNALIS Early or Ozark Witch Hazel

Y 1-4

Shrubs of wet, rocky areas, often spreading from underground parts; often found growing along stream-beds, or in large colonies on gravel bars; endemic to ozark regions of Missouri, Arkansas and Oklahoma.

Twigs densely hairy, stem much branched, to 3 m. tall.

Leaves broadly ovate, roundly serrate above the middle, tapering below; woolly.

Inflorescence: short pedicelled, axillary clusters of 3-6 flowers.

Flowers: typical family characters with ribbon-like petals to 1.5 cm. long, sepals dark; remain closed on cold days.

Specific epithet Lat., "spring", refers to very early blooming; common name refers to similarity of leaves to those of hazel (**Corylus**, which see); and "witch" is said to come from Anglo-Saxon word meaning "pliant", thus referring to use of stripped branches of this plant in dowsing, the ancient art of finding water.

HIPPOCASTANACEAE Buckeye Family

Trees in our area.

Leaves opposite, palmately compound, long petiolate; leaflets serrate.

Flowers irregular and showy in terminal inflorescence.

Fruit a leathery round capsule, often thorny.

Family name Lat., "horse-chestnut"; common name for large, smooth, brown seeds.

AESCULUS GLABRA Ohio Buckeye

Y 4-5

Woods and bottom-lands.

Trees to 15 m. tall.

Usually 5 elliptic leaflets, glabrous or with white pubescence.

Inflorescence: terminal panicle.

Four greenish-yellow petals 2 cm. long and subequal; calyx greenish-yellow with nearly equal lobes, 3-8 mm. long; stamens protrude beyond petals.

HYDROPHYLLACEAE Waterleaf Family

Herbaceous plants, usually hairy.

Leaves usually alternate and exstipulate; basal rosettes often present.

Inflorescence solitary, or a scorpioid cyme (coiled from the apex when young, as in Boraginaceae, which see); mostly bractless.

Flowers regular, usually 5-merous; perfect; hypogynous; corolla with joined petals, but lobed from above its middle; usually white-blue-purple.

Family name Gr. translated in common name, probably referring to original species, with watery stems and petioles but perhaps also to mottling in leaves of some species, similar to water-marks in fine paper.

1 At least lower stem leaves opposite; inflorescence solitary . . . **Ellisia**

1' All leaves alternate; flowers clustered in scorpioid cymes

2 Leaves relatively small (to 3.5 cm. broad, less than 7 cm. long) . . . **Phacelia**

2' Leaves relatively large (to 20 cm. broad, more than 7 cm. long) . . . **Hydrophyllum**

ELLISIA NYCTELEA Aunt Lucy

W 4-6

Thickets, flood plains, fields mostly in moist soil.

Stem weak, usually branched from base, glabrous or sparsely hairy; to 4 dm. tall.

Leaves: lowest opposite, upper alternate; pinnately lobed in 7-13 serrate lobes; petioled.

Inflorescence: solitary, short-pedicelled, arising opposite leaves.

Flowers: family characters; corolla to 8 mm. long, about equalling calyx.

HYDROPHYLLUM

Leaves large, lobed or divided.

Inflorescence: a forked scorpioid cyme.

Flowers: family characters; filaments hairy, ovary bristly-hairy; both stamens and style usually protruding beyond corolla.

1 All stem leaves deeply cut into 3-7 divisions, the lowest separated from those above . . . **H. virginianum**

1' Stem leaves with 5-9 lobes

2 Hairy plant, with some hairs to 3 mm. long; stamens only slightly protruding . . . **H. appendiculatum**

2' Plant glabrous except for sparse hairiness, rarely over 1 mm. long; stamens long protruding . . . **H. canadense**

HYDROPHYLLUM APPENDICULATUM Woollen Breeches

V 4-7

Rich woods, base of bluffs, wooded slopes, where it is often the dominant ground cover.

Stems very hairy, to 6 dm. tall.

Upper stem leaves palmately 5-lobed, as broad as long, usually over-topped by inflorescence; lower leaves pinnately divided; upper part of basal and young leaves often mottled with gray and pale green.

Inflorescence: loosely flowered, the pedicels bristly hairy.

Flowers: family and generic characters; calyx bristly hairy, and with a small, reflexed lobe between each pair of sepals; stamens only slightly protruding.

Generic name: see family; specific epithet refers to the appendages, or lobes between larger calyx lobes; common name refers to hairiness.

HYDROPHYLLUM CANADENSE Broad-leaf Waterleaf

W-V 5-7

Rich woods, in moist soil.

Nearly smooth (if hairy, these not over 1 mm. long); to 7 dm. tall.

Leaves palmately 5-7 lobed; heart-shaped at base; dark green; coarsely toothed; long petioled, and overtopping the inflorescence.

Inflorescence: short, usually glabrous peduncle, loosely flowered.

Flowers: family and generic characters; calyx lobes glabrous, or nearly so; stamens long-protruding, beyond the corolla.

HYDROPHYLLUM VIRGINIANUM Virginia Waterleaf

W-V 4-7

Low, rich, moist areas, often forming dense colonies.

Stem: smooth below, but often hairy above, to 7 dm. tall.

Leaves pinnately divided into 5-7 divisions, sharply serrate, the lowest lobes quite separate from those above, and often from each other; often blotched with gray.

Inflorescence long-peduncled and overtopping leaves; forked and densely flowered.

HYDROPHYLLUM VIRGINIANUM Virginia Waterleaf (con't.)

Flowers: family and generic characters; calyx lobes sparsely hairy; stamens long-protruding beyond the corolla.

PHACELIA GILIOIDES

W-B 4-6

Open areas, either rocky or rich; plant distribution limited to Missouri, Kansas and Oklahoma.

Stems mostly branched from base, stiff, gray-hairy; to 4 dm. tall.

Leaves alternate, pinnately lobed, the upper sessile or very short-petioled.

Inflorescence: typical scorpioid cyme terminal on branches.

Flowers: corolla to 8 mm. broad, its *lobes with wavy or toothed margins, their outer surface hairy.*

Generic name Lat., "bundle", probably referring to inflorescence.

PHACELIA PURSHII Miami Mist

V 4-6

Low, rich or gravelly soil, open woods, etc.

Sparsely hairy, simple to bushy-branched stem, to 5 dm. tall.

Leaves alternate, pinnately lobed, the upper sessile and clasping, the lower petioled.

Inflorescence covered with short, overlapping, in-curved hairs; 8-30 flowered; terminal and coiled.

Flowers: corolla *lobes fringed, the outer surface glabrous;* sepals very narrow, with long marginal hairs; filaments hairy.

Common name refers to lovely effect of group of blooming plants.

HYPERICACEAE St. John's-wort Family

(often called **Guttiferae**)

Woody or herbaceous plants; usually smooth.

Leaves: opposite or whorled, simple, entire, usually exstipulate; mostly sessile, often punctate.

Inflorescence: cymose or solitary.

Flowers: regular, hypogynous, usually perfect, 4- or 5-merous; usually yellow; 3-5 stigmas; many stamens, often united in groups.

ASCYRUM HYPERICOIDES St. Andrew's Cross

Y 5-10

Dry, rocky open areas, usually in acid soil.

Low, shrubby plant, usually much branched, the many, slender stems to 3 dm. long.

Leaves opposite, entire, narrowly oblong, simple, light green, sessile.

Flowers solitary, terminal and from upper leaf axils; 4-merous; the 4 petals light yellow, the 4 sepals in 2 unequal pairs.

Specific epithet simply means that this species looks like its relative, the genus **Hypericum** (see below); common name refers to arrangement of petals: the St. Andrew's cross is like a capital X.

HYPERICUM St. John's-wort

Herbs or shrubs.

Leaves opposite.

Flowers 5-merous, sepals often unequal and persistent in fruit, as are the styles.

Common name: "St. John's plant", "wort" being old English for "plant", St. John's day, June 24, when some species of the genus are normally in bloom.

1 All leaves tiny, only the mid-vein visible

2 Leaves scale-like to 3 mm. long . . . **H. gentianoides**

2' Leaves to 20 mm. long . . . **H. drummondii**

1' Leaves longer and/or broader

3 Black dots plainly visible on sepals and/or petals

4 Black dots only on edges or at tips of petals; few on sepals and stems . . . **H. perforatum**

4' Black dots abundant on petals, sepals and many parts of stems . . . **H. punctatum**

HYPERICUM St. John's-wort (con't.)

3' No black dots on sepals or petals

5 Leaves with 5 veins, rising from the base . . . **H. mutilum**

5' Leaves with single main vein, rising from base

6 Stems possibly woody at base, but mainly herbaceous; to 5 dm. tall . . . **H. sphaerocarpum**

6' Stem woody and shrubby, to 25 dm. tall . . . **H. spathulatum**

HYPERICUM DRUMMONDII Nits and Lice

Y 6-9

Open areas in acid soil.

Stems slender wiry, much branched, to 8 dm. tall.

Leaves opposite, entire, sessile, to 15 mm. long, with single mid-vein.

Inflorescence: flowers nearly sessile, chiefly solitary at nodes, on upper part of leafy branches.

Flowers: sepals to 6 mm. long, exceeding the petals.

HYPERICUM GENTIANOIDES Pine Weed or Orange Grass

Y 7-10

Open areas in acid soil.

Stem much branched, into thread-like, wiry twigs; to 4 dm. tall.

Leaves opposite, scale-like, to 3 mm. long.

Flowers nearly sessile, chiefly solitary at nodes, about 3 mm. wide.

Specific epithet infers that plant looks like a gentian; common name, "orange grass" as whole plant turns this color, when mature, and looks something like grass; "pine weed" we frankly do not understand.

HYPERICUM MUTILUM Dwarf St. John's-wort

Y 7-10

Usually grows in moist soil.

Weak, slender stem, widely branching above; twigs 4-angled; to 9 dm. tall.

Leaves opposite, entire, sessile, to 4 cm. long, 3-5 nerved, partly clasping.

Inflorescence: commonly much-branched and many-flowered; often with leafy bracts; terminal.

Flowers on long, slender pedicels; to 4 mm. wide; light orange-yellow.

HYPERICUM PERFORATUM* Common St. John's-wort

Y 5-9

Roadsides and other open areas.

Stems much branched, the branches sharply ridged below the base of each leaf; to 9 dm. tall.

Leaves opposite, entire, to 4 cm. long on main stem, smaller on branches; sessile; with transparent dots.

Inflorescence: terminal, many flowers clustered into flat or rounded, very leafy-bracted cymes.

Flowers showy, to 3 cm. broad, the petals black-dotted on margins, twice as long as sepals, orange-yellow.

Specific epithet Lat., "perforated", referring to transparent dots on leaves.

HYPERICUM PUNCTATUM

Y 6-9

Roadsides and other open areas.

Round stem, sparingly branched, conspicuously marked with both black and transparent dots; to 1.2 m. tall.

Leaves opposite, entire, sessile or with a clasping base; the largest to 6 cm. long.

Inflorescence crowded, small, the flowers short-pedicelled.

Flowers to 15 mm. broad, both petals and sepals copiously dotted or lined with black; very numerous.

Specific epithet Lat., "dotted", refers to markings on stem, sepals and petals.

HYPERICUM SPATHULATUM Shrubby St. Johns-wort

Y 6-9

Rocky, open areas, often in moist soil.

Shrubby plant, the stem woody; to 25 dm. tall.

Leaves opposite, entire, simple; dark green; thickish, with central mid-vein only; narrowly oblong; to 7 cm. long.

Inflorescence: terminal, and in upper pairs of leaf-axils, contracted so that corymb becomes interruptedly cylindrical.

Flowers to 2.5 cm. broad, the sepals green and shorter than petals.

HYPERICUM SPHAEROCARPUM

Y 5-9

Open, rocky or bottomland areas.

Plant sometimes branched from base, but stems mostly simple with somewhat woody base; angled; to 5 dm. tall.

Leaves narrowly oblong, opposite, entire, simple, sessile and sometimes with clasping base; to 7 cm. long.

Inflorescence: leafless, compound, usually many-flowered.

Specific epithet Lat., "round-fruited".

IRIDACEAE Iris Family

Monocot family.

Leaves long, narrow, parallel-veined; often only basal; usually folded.

Flowers 3-merous, perfect, the perianth of 2 whorls, both colored like petals, but sometimes different in other ways; epigynous, the 1 style often branched, broad and colored; 3 stamens, their filaments often joined; each flower with a spathe of 2 or more bracts.

1 Style-branches opposite the anthers, slender; iris-like leaves 16-25 mm. broad; perianth orange-red or salmon with brown-purple spots . . . **Belamcanda**

1' Leaves 1-11 mm. broad; perianth blue, purple, or white

2 Stem flattened and 2-edged; 5-many leaves without conspicuous veining . . . **Sisyrinchium**

2' Stem round; leaves 1-4, conspicuously parallel-veined . . . **Nemastylis**

O 7-8

BELAMCANDA CHINENSIS* Blackberry Lily

Rocky, open areas, usually in alkaline soil; roadsides, thickets.

Stout flower stalk branches above; to 6 dm. tall.

Leaves very similar to those of **Iris.**

Inflorescence: cymose and terminal; loosely many-flowered.

Flowers more open than true lilies, the 6 similar perianth parts marked with red or purple; style divided into 3 parts; stamens joined only at their base; flowers last only a single day.

Common name from fruit, consisting of round, black, fleshy seeds that resemble a large blackberry after the soon-deciduous capsule in which they form opens up; the "lily" part of this name refers to a non-botanical similarity.

V 4-5

NEMASTYLIS GEMINIFLORA

Limestone glades and prairies.

Three or 4 leaves on branched flowering stems; to 3 dm. tall.

Leaves linear, elongate folded.

Pedicelled flowers subtended by 2 bracts; flowers 4-7 cm. broad with 6 similar perianth parts; opening in the morning and closing before sundown.

Generic name Gr., "thread style", alluding to slender style-branches; specific epithet Lat., "twin-flowered" misleading as flower sometimes solitary.

W-B 5-6

SISYRINCHIUM ALBIDUM White blue-eyed Grass

Prairies, meadows, sandy places, and woodlands.

Flower stalks to 4 dm. tall; stems 1-4 mm. wide, *flattened and slightly winged.*

Linear to lanceolate leaves, pale green and glaucous; usually 2 spathes, often purplish-tinged.

Flowers in umbel-like clusters subtended by long green bract that encloses two thin spathes and inner bracts.

Perianth white or pale-blue and 1 cm. long; distinct yellow or greenish-yellow center.

SISYRINCHIUM CAMPESTRE **Prairie Blue-eyed Grass**

V-B,W 4-6

Prairies, glades, etc.

Pale green, erect plant, *the stem glacous, winged,* usually longer than leaves; to 5 dm. tall.

Leaves usually grasslike but sometimes broader; mostly basal.

Inflorescence: flowers in umbel-like clusters subtended by long green bract that encloses 1 thin spathe.

Flowers delicate, *blue to white.*

LAMIACEAE **Mint Family** (often called **Labiatae)**

Herbaceous plants, often aromatic.

Stems square.

Leaves opposite, simple, exstipulate.

Inflorescence: axillary in clusters, or terminal in spikes or racemes.

Flowers usually small; perfect, irregular, hypogynous; corolla usually 2-lipped; style often with 2-parted stigma, ovary deeply 4-parted; 2 or 4 stamens, in pairs of different lengths.

1 Calyx with protruberance on upper side . . . **Scutellaria**

1' Calyx without upper protruberance

2 All flowers in axillary inflorescences

3 Individual flowers not pedicelled

4 Calyx with 10 hooked teeth . . . **Marrubium**

4' Calyx with 5 teeth, not hooked

5 Corolla regular or nearly so . . . **Lycopus**

5' Corolla irregular

6 All leaves petioled . . . **Leonurus**

6' At least upper leaves sessile . . . **Lamium**

3' Individual flowers on pedicels at least 1 mm. long

7 Stems creeping and rooting at nodes . . . **Glechoma**

7' Stems erect

8 Calyx regular; flowers with 4 anther-bearing stamens

9 Corolla irregular . . . **Satureja**

LAMIACEAE Mint Family (con't.)

9' Corolla regular, or nearly so

10 Leaves toothless, or nearly so . . . **Isanthus**

10' Leaves with scattered teeth . . . **Mentha**

8' Calyx irregular

11 Flowers with 2 anther-bearing stamens . . . **Hedeoma**

11' Flowers with 4 anther-bearing stamens . . . **Satureja**

2' Flower clusters terminal (often axillary as well)

12 Corolla regular, or nearly so

13 Leaves entire

14 Calyx regular . . . **Isanthus**

14' Calyx irregular . . . **Trichostema**

13' Leaves serrate

15 Corolla with 5 lobes

16 One corolla lobe fringed . . . **Perilla**

16' None of the corolla lobes fringed . . . **Cunila**

15' Corolla with 4 lobes . . . **Mentha**

12' Corolla irregular

17 Individual flowers with pedicels 1 mm. or more long

18 Flowers with 2 anther-bearing stamens . . . **Salvia**

18' Flowers with 4 anther-bearing stamens . . . **Teucrium**

17' Individual flowers not pedicelled

19 Calyx regular

20 Flowers with 2 anther-bearing stamens . . . **Monarda**

20' Flowers with 4 anther-bearing stamens

21 Inflorescence round, head-like, terminal . . . **Pycnanthemum**

21' Inflorescence not as above

22 Inflorescence a long, slender, densely crowded spike . . . **Agastache**

22' Inflorescence loose and interrupted

23 Leaves glabrous and sessile . . . **Physostegia**

23' Leaves petioled . . . **Stachys**

19' Calyx irregular

24 Inflorescence dense and compact

LAMIACEAE Mint Family (con't.)

25 Flowers with 2 anther-bearing stamens . . . **Blephilia**

25' Flowers with 4 anther-bearing stamens

26 Corolla usually violet, the stamens not protruding . . . **Prunella**

26' Corolla usually white with violet dots, at least some stamens protruding . . . **Pycnanthemum**

24' Inflorescence elongate and loosely flowered . . . **Salvia**

AGASTACHE NEPETOIDES Yellow Giant Hyssop

Y 7-9

Open woods, in moist or rich soil.

Stout stem, sharply 4-angled; branching above; to 1.5 m. tall.

Leaves opposite, coarsely serrate, thin, reduced in size upwards; fine-hairy below. Inflorescence: nearly cylindric, peduncled spike, to 2 dm. long.

Flowers small, numerous, the calyx regular, the corolla longer, 2-lipped; 4 stamens (two pairs curve in opposite directions).

Generic name Gr., "much spiked", refers to inflorescence; specific epithet tells us that the plant resembles catnip, **Nepeta**; common name says the same of similarity to hyssop, not found in our area.

BLEPHILIA CILIATA Ohio Horsemint

P-V 5-8

Open woods, glades, etc., usually in alkaline soil.

Stem *somewhat downy*, usually not branched, to 9 dm. tall.

Stem leaves opposite, downy on lower surface, narrowed at base; *sessile*; leaves of runners from base of plant petioled.

Inflorescence: small flowers densely packed in short, *thick terminal, and sometimes axillary, spikes*; each whorl subtended by bracts with hairy margins.

Flowers irregular, calyx and corolla both 2-lipped; stamens protruding from corolla.

BLEPHILIA CILIATA Ohio Horsemint (con't.)

Generic name Gr., "eyelash" refers to bracts and calyx teeth, as does specific epithet; "horse" in the common name of a plant generally translates to mean "coarse" or "large" . . . this one, then, being a mint-like plant, but bigger than most; despite this, there is little or no odor to this plant.

BLEPHILIA HIRSUTA Wood Mint or Pagoda Plant

P-V 5-9

Rich, low woods.

Stems *hairy*, especially above, the hairs to 2 mm. long; usually branched; to 2 m. tall.

Leaves usually serrate, *petioled*.

Inflorescence: as in **B. ciliata**, but *whorls of flowers are more distinctly separate.*

Flowers irregular and much like **B. ciliata.**

Specific epithet Lat., "stiff-haired", 2nd common name refers to pagoda-like pattern of interrupted inflorescence.

CUNILA ORIGANOIDES Dittany

P-W 7-11

Dry, rocky, open areas, in acid soil; fragrant.

Stem sometimes woody at base, stiff, glabrous, freely branched, to 4 dm. tall.

Leaves opposite, glabrous, pointed, slightly serrate, dotted, sessile or nearly so.

Inflorescence: terminal cymes larger and more loosely branched than axillary.

Flowers: calyx regular, corolla nearly so, but somewhat 2-lipped; 2 anther-bearing stamens protrude.

Specific epithet infers that plant resembles **Origanum**, which is not found in our area.

LAMIACEAE

GLECHOMA HEDERACEA Ground Ivy

B 3-7

Low woodlands, waste areas, usually in damp or shaded soil.

Creeping plant, stems rooting at the nodes; to 1 m. long.

Leaves opposite, roundish, with scalloped margins; petioled.

Inflorescence: usually 3 short-pedicelled flowers in leaf axils.

Flowers with 2-lipped corolla, much longer than calyx and the lower lip much larger than upper; 4 stamens with anthers, the upper pair longer than the lower.

Specific epithet and common name both refer to similarity of leaves to those of English ivy (**Hedera helix**).

HEDEOMA HISPIDA Mock Pennyroyal

B 5-7

Prairies, glades and other rocky, open areas; strong-scented.

Hairy stemmed plant to 20 cm. tall.

Leaves opposite, *entire;* narrow (*rarely to 4 mm. wide);* hairy and with hairy margins; crowded; *sessile or nearly so.*

Inflorescence: axillary, few-flowered whorls.

Flowers pedicelled, both calyx and corolla somewhat 2-lipped, the latter scarcely or only slightly longer than the former; 2 stamens.

Generic name from Gr., "sweet scent"; common name from similarity to another species of this genus, **H. pulegioides** (see below).

HEDEOMA PULEGIOIDES American Pennyroyal

B 7-9

Dry, usually rocky, open areas.

Erect plants, branching, hairy (at least above); to 4 dm. tall.

Leaves opposite, *to 13 or more mm. wide, the principal ones petioled; the longest usually toothed and petioled;* strongly aromatic.

Inflorescence and flowers very much as in **H. hispida.**

HEDEOMA PULEGIOIDES American Pennyroyal (con't.)

Generic name: see **H. hispida**; specific epithet refers to **Mentha pulegium**, known elsewhere as "pennyroyal", a word derived from Old French, and referring to it as a "fleabane" the plant's leaves are said to serve as an adequate insect repellent; this species is also much more strongly aromatic than **H. hispida**.

ISANTHUS BRACHIATUS False Pennyroyal

B 7-10

Gravel bars, and other rocky, open areas.

Stem slender, much-branched, finely sticky-hairy; to 4 dm. tall.

Leaves opposite, narrowed at the base, entire; short-petioled; only slightly aromatic.

Inflorescence very leafy, the bracts little smaller than stem-leaves; 1-3 flowers from each, producing large, leafy, terminal and axillary panicles.

Flowers quite regular; corolla slightly longer than calyx; 4 stamens slightly protruding from it; pedicelled; pale blue.

Generic name Gr., "equal flower", referring to almost regular corolla; specific epithet Lat., "with arm-like" branches; see **H. pulegioides** for explanation of common name.

V or P 2-11

LAMIUM AMPLEXICAULE* Henbit

Weedy plant of open areas.

Stem often arched; glabrous; remotely leafy; branching from base; to 3.5 dm. tall.

Leaves opposite, roundish and with rounded teeth; soft-hairy above; lowest leaves long-petioled, middle shorter, *the upper sessile and clasping the stem.*

Inflorescence: 6-12 flowers subtended by scarcely reduced leaves, in upper axils and terminal.

Flowers: 5-toothed calyx almost regular; corolla irregular, strongly 2-lipped, very slender below, abruptly dilated above; 4 stamens inside upper lip, 1 pair longer than the other.

Specific epithet Lat., "surrounding stem", refers to clasping upper leaves; common name implies that seed makes a tasty bite for poultry and other birds.

LAMIACEAE

LAMIUM PURPUREUM* Dead Nettle

V 3-10

Weedy plant of open areas.

Similar to **L. amplexicaule** in habit and size.

Leaves: *all petioled,* the upper overlapping; ovate and pointed; roundly serrate, the upper surface often purplish.

Inflorescence: flowers in dense whorls, forming a leafy terminal spike.

Flowers similar to those of **L. amplexicaule,** but usually paler, and *with a ring of hairs inside the corolla tube.*

Specific epithet refers to purplish tinge of leaves; common name to similarity of this plant to the stinging kind of nettle plant **(Urtica),** this one being "dead" as it does not have the stinging hairs of same (which see).

LEONURUS CARDIACA* Common Motherwort

V-B,P 5-8

Roadsides, railroads, abandoned fields and pastures; plant strongly scented.

Stems stout, erect, to 1.5 m. tall; fine pubescence on nodes and angles of stem.

Lower leaves of stem maple-leaf shaped with 3-5 main sharply-toothed lobes and long petioles; upper leaves progressively smaller and narrower.

Whorls of flowers in axils of upper leaves.

Corolla tube with arched upper lip; calyx-tube 5-angled and 5-ribbed with little pubescence.

Generic name Gr., "lion's-tail", for reasons we don't understand; specific epithet and common names both allude to presumed medicinal properties.

LYCOPUS Bugle Weed or Water Horehound

W 6-10

Three species in our area, generally found in low, wet grcund and resemble **Mentha** (mint), but are not fragrant.

Leaves opposite, coarsely serrate or even pinnately lobed.

Inflorescence: numerous small, but dense, axillary clusters, the bracts similar to leaves, and much longer than the flowers.

LYCOPUS Bugle Weed or Water Horehound (con't.)

Flowers: small; calyx 5-toothed and regular; corolla nearly regular.

Generic name Gr., "wolf's foot" from some presumed resemblance in the leaf shape to same, perhaps 1st common name refers to shape of flower; certainly 2nd refers to similarity of this plant to the true horehound, **Marrubium**, which see.

MARRUBIUM VULGARE* Horehound

W 5-9

Fields and waste areas.

Stout-stemmed herb, branching from base; white hairy, to 6 dm. tall.

Leaves opposite, wrinkled, softly white-hairy, round-toothed, the lower petioled; strongly bitter-aromatic.

Inflorescence: many-flowered, axillary, densely crowded.

Flowers small; calyx with 10 hooked teeth, the alternate ones shorter; calyx barely regular, corolla strongly 2-lipped.

Generic name Heb., "bitter juice"; specific epithet, "common"; common name from Middle English, "gray plant", referring to white woolly appearance.

MENTHA Mint

P-B 6-10

Low, wet areas, where the plants tend to grow in large colonies

3 species of **Mentha** in our area share the characteristic of erect growth, as well as the habitat.

Leaves opposite and toothed; strongly aromatic

Inflorescence: small flowers in dense axillary clusters, or in terminal spikes (sometimes interrupted).

Flowers pedicelled, calyx regular; corolla regular, or slightly irregular; 4 stamens essentially equal.

LAMIACEAE

P 5-8

MONARDA FISTULOSA Bergamot

Prairies, glades and other open areas.

Stem often branching and hairy above; to 12 dm. tall.

Leaves gray-green and sometimes pink-tipped, ovate, firm, *petioled.*

Inflorescence terminal, the conspicuous flowers in dense clusters; in a few whorls, surrounded by bracts.

Flowers with calyx densely hairy within, regular; corolla irregular, the upper lip densely hairy at tip; 2 stamens and style protruding.

W or P 4-6

MONARDA RUSSELIANA Horsemint

Dry, open areas, on acid soil; the more common species.

Stems rarely branched, glabrous or sparsely hairy, to 6 dm. tall.

Leaves opposite, lanceolate, inconspicuously serrate, *sessile or very short-petioled.*

Inflorescence: terminal, the subtending bracts often purplish.

Flowers with calyx densely hairy within, regular; corolla irregular, purple dotted, the upper lip densely hairy at tip; 2 stamens and style protruding; fragrant.

W 8-10

PERILLA FRUTESCENS* Beefsteak Plant

Rich, low, wet areas, but also in dry woodlands.

Coarse, erect, branching plant, to 1 m. tall.

Leaves (and branches) often suffused with purple; opposite, large, coarsely toothed, long petioled; aromatic and with a bronzy luster.

Inflorescence: long terminal and axillary racemes, with each flower borne singly in axil of small bract.

Flowers: calyx white-hairy; corolla regular or nearly so, with 5 lobes, one of which is fringed; 4 stamens nearly equal, and about as long as corolla.

Specific epithet Lat., "shrubby"; common name undoubtedly from purplish color with which plant is suffused.

PHYSOSTEGIA VIRGINIANA False Dragonhead or Obedient Plant

P-V 5-9

Moist, open areas.

Stem smooth, simple or branched at summit, to 1.5 m. tall.

Leaves opposite, lanceolate, often copiously sharp-toothed, much reduced upward; glabrous; sessile.

Inflorescence: showy; flowers borne singly in axils of small bracts on terminal spikes.

Flowers showy; corolla to 30 dm. long; strongly 2-lipped and much longer than the regular calyx; stamens 4, in 2 pairs, the lower longer.

Generic name Gr., "a covering bladder", refers to inflation of calyx as flower matures; 1st common name to closely related dragonhead, **Dracocephalum**, so-called from shape of corolla; 2nd name to strange quirk of this plant; when flowers are moved out of normal position of stem they stay where they are put.

PRUNELLA VULGARIS Self-Heal or Heal All

P-V 5-10

Low and waste areas, where it is rather common.

Stem creeping or erect, simple or branched, to 6 dm. long.

Leaves glabrous or sparsely hairy above, entire or somewhat round-toothed; petioled; aromatic.

Inflorescence: flowers in axils of broad bracts, forming thick, dense, terminal cluster.

Flowers with irregular calyx and corolla; calyx green or purple, the tube hairy, the lobes marginally hairy; 4 anther-bearing stamens not protruding.

Specific epithet Lat., "common"; common names refer to old-time use of plant in a number of medicinal ways.

PYCNANTHEMUM Mountain Mint

Erect herbs with pungent, mint-like flavor; branched above.

Leaves opposite.

Inflorescence: dense whorls of small flowers crowded with bracts: usually terminal but sometimes axillary.

Flowers small; calyx more or less regular; corolla irregular; 4 stamens, lower pair somewhat longer than upper.

Generic name Gr., "dense flower", referring to the crowded inflorescence; common name misleading, as this is by no means a typical mountain plant in our area.

PYCNANTHEMUM Mountain Mint (con't.)

1 Upper bracts and leaves whitish, at least on upper surface . . . **P. albescens**

1' Upper bracts and leaves not whitened

2 Some part of upper stem hairy . . . **P. pilosum**

2' Stem almost entirely glabrous . . . **P. tenuifolium**

PYCNANTHEMUM ALBESCENS

W 7-9

Dry, rocky areas, mostly in sandy soil.

Stout stemmed plant, branching and somewhat hairy above; to 1 m. or more tall.

Upper leaves of stem and branches, as well as bracts, strongly whitened, at least on upper surface; leaves also densely white hairy below, petioled, opposite.

Inflorescence: loosely flowered, branching and with flower clusters somewhat separate; round, head-like, and terminal.

Flower: calyx irregular.

Specific epithet Lat., "whitish", referring to stem and upper leaves.

PYCNANTHEMUM PILOSUM Hairy Mountain Mint

W 8-9

Prairies and other open, dry areas; common species of our area.

Stems branched above, softly hairy, especially on sides and angles.

Leaves tapering to short petioles, opposite; mostly entire; hairy over whole lower surface.

Inflorescence: numerous dense heads, terminal or also in upper axils, the clusters not separated.

Flower: calyx nearly regular.

PYCNANTHEMUM TENUIFOLIUM Slender Mountain Mint

W 6-9

Open areas of all sorts.

Stems glabrous, very leafy due to numerous short, axillary branches.

Leaves very narrow (to 5.5 mm. wide), opposite, entire, sessile.

Inflorescence: very numerous rounded, dense, peduncled heads.

Flower, calyx nearly regular.

Specific epithet Lat., "slender-leafed".

SALVIA LYRATA Lyre-leaved Sage

B 4-6

Open, moist areas (but not frequent in ours).

Stems to 6 dm. tall, usually with only 1 pair of leaves.

Basal rosette of leaves long-petioled, deeply pinnately lobed into rounded segments, thinly hairy on both sides; stem leaves smaller and sometimes sessile, but otherwise similar; often purplish.

Inflorescence: terminal raceme, the whorls of flowers quite separate, and each about 6-flowered.

Flower: corolla and calyx both irregular, the former to 2.5 cm. long, its upper lip much shorter than lower; stamens 2.

Generic name Lat., "safe, well", for presumed medicinal properties. Our spicy sage comes from a different species of this genus, **Salvia officinalis**.

SATUREJA ARKANSANA Calamint

V 5-10

Open, usually moist areas, mostly in alkaline soil.

Slender stem, to 4 dm. tall; often with leafy runners, rooting at nodes; nearly or quite glabrous.

Stem leaves narrow, entire; leaves on runners smaller, rounder, usually rose-purple below, entire.

Inflorescence: few- to many-flowered, each flower long-pedicelled and subtended by 2 narrow bracts; axillary.

Flowers: calyx regular, corolla irregular; 4 stamens; branches of style curled.

SATUREJA ARKANSANA Calamint (con't.)

Generic name, Lat., "savory", but the spice so-called comes from another species.

SCUTELLARIA Skullcap

Bitter-tasting, non-aromatic plants.

Inflorescence: often 1-sided axillary racemes, or terminal spikes or racemes.

Flowers: calyx strongly 2-lipped, the upper bearing at its top a conspicuous crest; corolla irregular, and much longer than calyx; stamens 4, in 2 unlike pairs.

Generic name Lat., "a dish" refers to protruberance on back of upper lip of calyx.

1 Leaves entire . . . **S. parvula**

1' At least main leaves of stem somewhat toothed

2 Flowers single in axils of leaves or bracts . . . **S. lateriflora**

2' Flowers 2 to several in terminal racemes

3 Main stem leaves cordate at base . . . **S. ovata**

3' Main stem leaves not cordate at base . . . **S. incana**

SCUTELLARIA INCANA Downy Skullcap

B 6-9

Rocky open areas or thickets; the commonest Ozark species.

Stem minutely hairy, usually not branched below inflorescence, to 1 m. tall.

8-15 pairs of leaves, the lowest slender-petioled and with rounded teeth, the upper whitish with minute hairiness on lower surface, less so or completely glabrous above; largest from mid-stem upward; entire.

Inflorescence: usually 5 to many racemes, both terminal and axillary, the latter sometimes branched; lowest pair of flowers subtended by leaf-like bracts; 2 or more in each axil.

Flowers: calyx densely hairy, crested; corolla densely gray-hairy, to 2.5. cm. long.

Specific epithet Lat., "hoary"; common name refers to same characteristics.

SCUTELLARIA LATERIFLORA Mad-dog Skullcap

B-W 6-10

Low, wet areas.

Stem erect, from creeping base, to 7 dm. tall; glabrous or minutely hairy on angles.

Leaves opposite, thin, coarsely toothed, and with petioles hairy above and to 30 mm. long.

Inflorescence: terminal and axillary, often numerous, racemes; flowers on one side only, 1 to many, each subtended by progressively smaller bracts.

Flowers small, the slender corolla to 8 mm. long.

Specific epithet Lat., "lateral flowered" refers to 1-sided racemes, common name to a folk-belief that the plant can cure both hysteria and rabies.

SCUTELLARIA OVATA

B 5-10

Rocky, open areas.

Stem hairy, occasionally only 0.5 dm. tall, but to 8.5 dm.

Leaves deeply cordate at base, long petioled and serrate; wavy.

Inflorescence terminal.

Flowers with whitish lower lip, 1-2.3 cm. long.

SCUTELLERIA PARVULA Small Skullcap

B 5-7

Rocky, open areas.

Stem commonly forking from base, slender, to 3 dm. tall.

Leaves opposite, entire, broad at base; mostly sessile; hairy on upper surface.

Inflorescence: axillary, the flowers pedicelled.

Flower: corolla slender, to 1 cm. long.

Specific epithet and common name both refer to size of plant.

LAMIACEAE

STACHYS PALUSTRIS Woundwort

P-V 7-9

Wet areas.

Rank-smelling plant; stem hairy; to 1 m. tall.

Leaves opposite, narrow, rounded at base, serrate, *hairy on both surfaces*; sessile to short-petioled.

Inflorescence: several whorls of (usually) 6 flowers, the lowest subtended by bracts, the upper often without; terminal.

Flowers: calyx regular, *densely hairy;* corolla irregular, the lower lip much longer than upper.

Generic name Gr., "spike", refers to inflorescence; specific epithet Lat., "of marshes" refers to typical habitat; common name from fact that the plant was highly recommended in early English herbals as a "vulnerary", used in treating wounds.

STACHYS TENUIFOLIA Rough Hedge Nettle

P 6-9

Low, wet areas.

Stems usually simple, glabrous or short-hairy, to 1.3 m. tall.

Leaves opposite, narrow, pointed, thin, round-toothed, *usually glabrous,* petioled.

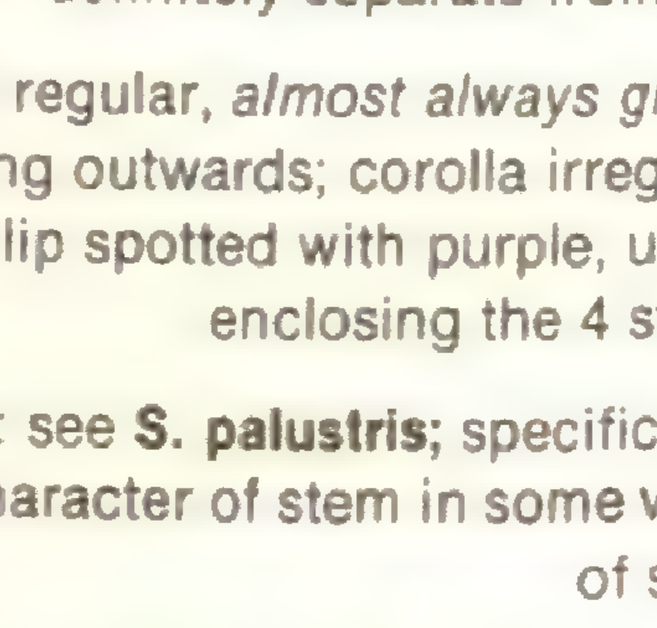
Inflorescence: several whorls of usually 6 flowers, each definitely separate from others.

Flowers: calyx regular, *almost always glabrous,* its teeth curving outwards; corolla irregular, its 3-lobed lower lip spotted with purple, upper lip enclosing the 4 stamens.

Generic name: see **S. palustris;** specific epithet Lat., "thin-leaved"; common name from bristly character of stem in some varieties of species.

TEUCRIUM CANADENSE Wood Sage or American Germander

P-V 6-9



Open, often wet areas.

Stem stiff, hairy, rarely branched, to 1 m. tall.

Leaves ovate, thick, serrate, short-petioled and hairy on both surfaces.

Inflorescence: crowded whorls of several pedicelled flowers in terminal, cylindrical raceme; lower bracts longer than flowers they subtend.

TEUCRIUM CANADENSE Wood Sage or American Germander (con't.)

Flowers: calyx irregular, hairy; corrolla irregular and so split that the 4 stamens protrude and arch over it; to 2 cm. long.

First common name refers to similarity of this plant to **Stachys** with which it is readily confused (the obvious difference being that corolla of latter genus is not split); second common name refers to another species used medicinally since ancient times.

TRICHOSTEMA DICHOTOMUM Blue Curls

B 8-10

Open areas, particularly in acid soil.

Stems much branched, densely glandular-hairy, especially above and in inflorescence; to 7 dm. tall.

Leaves opposite, entire, oblong.

Inflorescence: flowers usually solitary on pedicels from axils of reduced leaf-like bracts.

Flowers: calyx irregular; corolla nearly regular; 4 stamens long-protruding, and curved downward, the filaments very thin.

Generic name Gr., "hair-like stamens" from thin filaments; specific epithet Lat., "forking in pairs", refers to branching pattern; common name to downward-curving stamens.

LAURACEAE Laurel Family

Woody plants; aromatic.

Leaves simple, alternate, often marked with transparent dots; exstipulate.

Flowers small, regular, hypogynous; perianth of 4-6 colored sepals.

LINDERA BENZOIN Spice Bush

Y 3-4

Low, wet woodlands or thickets.

Common, much-branched shrub in our area: leaves, twigs and buds aromatic; bark warty; to 5 m tall

Leaves alternate, simple, entire, firm, tapering at base, short-petioled; pale or gray on under surface pinnately veined.

Inflorescence: flowers in almost sessile, lateral clusters, from nodes of last year's stems; appearing before leaves.

LINDERA BENZOIN Spice Bush (con't.)

Flowers: calyx of 6 honey-yellow sepals; pistillate flowers with 15-18 rudimentary stamens (of 2 sorts) and globular ovary; showier staminate flowers with 9 stamens in 3 rows, the inner differing from outer (perfect flowers also found on both staminate and pistillate plants).

Specific epithet leads one to believe this plant produces the medicinal "tincture of benzoin", but it does not; the benzoin of commerce comes from a genus **(Styrax)** of quite another family; common name alludes to once popular use of powdered **Lindera** fruits as substitute for allspice, and the fact that all aromatic parts can be used in brewing medicinal tea.

SASSAFRAS ALBIDUM Sassafras

Y 4-5

Woody plant of dry, acid soil, often forming thickets; common in woods of our area.

Twigs pale green, often up-turned, the young ones glabrous, or nearly so, and often glaucous; aromatic throughout; often shrubby, but occasionally to 30 m. tall.

Leaves alternate, simple, entire, or 2-, 3-, or even 5-lobed, their shape varying considerably even on same plant; palmately 3-veined; long petioled.

Inflorescence: flowers loosely clustered, at tip of last year's branches, on peduncles and pedicels originally short, but lengthening and eventually turning red; appearing with the leaves.

Flowers greenish yellow, with 6-parted calyx; dioecious; pistillate flowers with 6 short rudimentary stamens and ovoid ovary; staminate with 9 stamens, the inner 3 with basal, stalked glands.

Generic name: Indian, as pronounced by early French settlers in Florida; specific name Lat., "whitish", probably applies to the often glaucous twigs.

LILIACEAE Lily Family

Herbaceous (except **Smilax**); monocots of diverse structure and habit.

Flowers: conspicuous perianth of 6 tepals; usually perfect and hypogynous; 1 pistil, 6 stamens.

1 Main leaves arising at or near base of plant, the flowers produced at tip of leafless stalk

2 Only 2 leaves present at flowering time; 1 flower only . . . **Erythronium**

2' Without above characters

3 Lowest leaves 6 cm. or more broad . . . **Veratrum**

3' No leaves over 4 cm. broad

LILIACEAE Lily Family (con't.)

4 Leaves thick, hard to tear, with thread-like fibers loose on their margins . . . **Yucca**

4' Without above characters

5 Flower to 12 cm. wide, 13 cm. long on flowering stem 50-100 cm. tall . . . **Hemerocallis**

5' Without above characters

6 Inflorescence umbellate

7 Plant with odor of onion or garlic . . . **Allium**

7' Plant innocent of such an odor . . . **Nothoscordum**

6' Inflorescence, a solitary raceme or panicle . . . **Camassia**

1' Main leaves alternate or whorled

8 Leaves whorled

9 Leaves in 1 whorl of 3 . . . **Trillium**

9' Leaves in 6 to 11 whorls . . . **Lilium**

8' Leaves alternate

10 Leaf base encircling stem . . . **Uvularia**

10' Leaf base not encircling stem

11 Stem woody and prickly, at least at base; climbing plant; leaves petioled . . . **Smilax**

11' Without above characters

12 Stem unbranched, flowers from its sides, or hanging below leaves . . . **Polygonatum**

12' Flowers at top of stem, in raceme or panicle . . . **Smilacina**

ALLIUM Onion, Garlic

Plants growing from bulbs; usually pungent.

Leaves usually all basal, or nearly so; long, narrow, parallel-veined

Inflorescence: umbel terminating stem and subtended by 1 to 3 bracts.

Flowers: 6 tepals, the inner slightly differentiated; otherwise typical of family.

1 Stem with leaves above base; leaves round and hollow . . . **A. vineale**

1' Stems leafless, or nearly so; leaves flat

2 Umbels with few if any flowers, these replaced by small bulbs . . . **A. canadense**

2' Umbels producing flowers

3 Spring-flowering plants . . . **A. mutabile**

3' Summer and autumn-flowering plants . . . **A. stellatum**

ALLIUM CANADENSE Wild Garlic

P-W 5-7

Open areas, usually in moist soil.

Stem stout, to 6 dm. tall; plant with strong odor.

Leaves very narrow, soft, flaccid, smooth, flattish; basal except sometimes a few very low on stem.

Inflorescence: umbel usually consisting only of white to purplish, sessile, small bulbs.

Flowers, when rarely present, pedicelled.

ALLIUM MUTABILE Wild Onion

P 4-6

Glades, prairies and other open areas.

Stem to 6 dm. tall, stout.

Leaves narrow, firm, pointed.

Inflorescence: umbel of flowers.

Flowers pedicelled, their perianth parts at least as long as stamens.

ALLIUM STELLATUM Wild Onion

P 7-11

Limestone glades and other open areas.

Stem to 7 dm. tall, stiff.

Leaves thick, hard, rounded on back.

Inflorescence: umbel of flowers.

Flowers pedicelled, their stamens usually longer than perianth parts.

ALLIUM VINEALE* Field Garlic

P-W-G 4-7

Open areas (in which it can become a noxious weed).

Stem stiff, erect, leafy to near middle; to 10 dm. tall.

Leaves round, hollow (at least below); blue-green.

Inflorescence: umbel of flowers, mixed with small bulbs.

Flowers, when present, pedicelled.

Specific epithet Lat., "of vineyards", where it was undoubtedly a pest, when the name was applied.

CAMASSIA SCILLOIDES Wild Hyacinth

W-B 3-5

Rocky, usually open areas and usually in alkaline soil.

Stout-stemmed plant, to 6 dm. tall.

Leaves narrow (to 10 mm. wide), basal, shorter than peduncle.

Inflorescence, terminal raceme of 20-50 flowers, each subtended by a thread-like bract.

Flowers pedicelled, these about as long (to 2 cm.) as subtending bracts; otherwise with family characters.

Generic name, American Indian; specific epithet and common name both refer to presumed similarity to cultivated hyacinths.

ERYTHRONIUM ALBIDUM Dog-tooth Violet or Trout Lily

W 3-4

Low, moist woods, usually in alkaline soil; often in large colonies.

Stout stem, to 2 dm. tall.

Leaves basal, glaucous, narrowing to petiole that sheathes stem; mottled on under surface, parallel-veined; two leaves always produced on flowering plants, but many single leaves usually present in colony.

Inflorescence: single flower, terminal on leafless stem; peduncle stout, to 25 cm. tall.

ERYTHRONIUM ALBIDUM Dog-tooth Violet or Trout Lily (con't.)

Flowers: showy, solitary, with family characters; tepals usually reflexed at maturity, to expose 6 large, yellow stamens and single pistil; flowers hang from peduncle.

First common name probably from shape of leaf and resemblance of flower to certain violets; second refers to trout-like mottling of leaves.

HEMEROCALLIS LILIO-ASPHODELUS* **Orange Day-lily**

O 5-8

Garden escape, well established on usually moist soils.

Leafless stem to 1 m. tall.

Leaves all basal, long, parallel-veined, keeled and to 2 cm. broad.

Inflorescence: terminal cluster of large, showy flowers, each lasting for a single day.

Flowers deeper colored at center; petals all recurved, the inner wavy-margined.

Generic name Gr., "beauty for a day"; specific epithet refers to resemblance to related plants, common name to both habit and resemblance.

LILIUM MICHIGANENSE Michigan Lily

O 6-7

Swampy meadows, low woods, etc.

Stems smooth and glabrous; to 1.5 m. tall.

Leaves whorled, lanceolate, narrowed at both ends.

Inflorescence of 1 to several showy flowers.

Flowers nodding, the tepals greenish at base and strongly recurving; other characters familial.

NOTHOSCORDUM BIVALVE False Garlic

W 3-5 & 10-11

Rocky. open areas.

Leafless stem to 3 dm. tall; stem and leaves with no taste or odor.

Leaves all basal, few and very narrow.

Inflorescence: 2-bracted umbel, 5-12 flowers on slender pedicels, often of different lengths.

Flowers smallish, with family characters; fragrant.

Generic and common names refer to similarity to garlic, "false" because the typical odor is not present; specific epithet refers to pair of thin colorless bracts below inflorescence, because of presumed similarity between these and an oyster shell!

ORNITHOGALUM UMBELLATUM *Star-of-Bethlehem

W 4-6

Roadsides and grasslands; flowers open only in sun.

Leaves grasslike with pale midrib, to 30 cm. high.

Flower stalks 1-3 dm. high bear 3-7 flowers in an umbel on spreading-ascending pedicels.

Flowers have 6 lance-oblong petals 1.5-2 cm. long, white above and with broad green midstripe beneath; 6 stamens with broad flat filaments; 3-sided style.

Generic name from Gr., "bird milk"; specific epithet refers to inflorescence.

POLYGONATUM COMMUTATUM Solomon's Seal

G 4-6

Rich or rocky woods, thickets or open areas.

Stem usually stout, glabrous, arching, to 12 dm. tall.

Leaves alternate, glabrous, parallel veined, pale and glaucous on lower surface; rather corrugated, and with puckered margins.

Inflorescence: axillary, 1 to several pedicelled flowers hanging below leaves.

Flowers greenish white, bell-shaped, with family characters.

Generic name: Gr., "many joints" refers, as does common name "seal", to smooth, flat scars on rhizome.

SMILACINA RACEMOSA False Solomon's Seal

W 4-6

Rich or rocky woodlands.

Stem stiffly arched, slightly zig-zag, finely hairy, to 8 dm. tall; 5-12 or more firm, abruptly petioled, parallel-veined leaves, finely hairy on lower surface.

Inflorescence: usually peduncled, terminal panicle with numerous, short-pedicelled flowers on its hairy branches.

Flowers small, the perianth shorter than stamens; typical of family.

Common name refers to similarity in foliage and habit to **Polygonatum**, although **Smilacina** does not have the underground rhizome scars that explain **Polygonatum's** common name.

SMILAX TAMNOIDES Bristly Greenbrier or Carrion Flower

Y-G 5-6

Low, wet areas, or rich wooded slopes; often forming an impenetrable thicket.

Woody and armed with prickles, at least near base; green, round, glabrous, plant stem climbing with aid of coiled tendrils, pairs of which arise at base of leaf petioles; unpleasant odor.

Leaves simple, alternate, ovate, thin, the main veins following leaf outline, and joined by netted smaller veins; petioled.

Inflorescence: simple, long-peduncled, axillary umbel.

Flowers small, imperfect, regular; plants dioecious.

Common names refer to characteristics noted above.

TRILLIUM

Stems erect, with single whorl of 3 largish leaves.

Leaves net-veined.

Inflorescence solitary.

Flowers with 6 stamens, 3-parted stigmas; calyx different from corolla.

1 Flower sessile

2 Mature leaves petioled; sepals reflexed . . . **T. recurvatum**

2' Mature leaves sessile; sepals not reflexed . . . **T. viride**

TRILLIUM (con't.)

1' Flower stalked

3 Leaves sessile . . . **T. flexipes**

3' Leaves petioled . . . **T. nivale**

TRILLIUM FLEXIPES Tall White Trillium

W 4-5

Rich, wooded areas, and/or along streams.

Stems to about 6 dm. tall.

Leaves sessile, to 20 cm. broad and long; abruptly long-pointed.

Peduncle to 12 cm. long, usually bending downwards when flower is open.

Flowers with spreading petals and creamy-white anthers, on filaments half as long or less as anthers; sepals lanceolate, about equal in size to petals.

Specific epithet refers to bending peduncle.

TRILLIUM NIVALE Snow Trillium

W 3-4

Rare in our area; found only on eroded, north-facing, alkaline slopes; the smallest **Trillium** in the state, and the earliest to bloom.

Stems to 15 cm. tall.

Leaves petioled, roundish.

Peduncle short, and usually erect.

Flowers with spreading petals, to 3 cm. long; sepals lanceolate or shorter.

Specific epithet Lat., "snowy", refers to early bloom and/or white color.

TRILLIUM RECURVATUM Purple Trillium or Purple Wake-robin

P-B 4-5

Usually in rich, wooded areas.

Stems to 4.5 dm. tall.

Leaves petioled, often mottled with purple.

Flowers sessile; sepals strongly reflexed, narrow and pointed; purplish petals longer, and distinctly narrowed at base.

Specific epithet refers to reflexed sepals.

TRILLIUM VIRIDE Green Trillium

G-P-B 4-5

Rich areas, usually in limestone areas; plant endemic to this region, found only in Missouri, southern Illinois, eastern Kansas and Oklahoma, and northern Arkansas.

Stout stem to 5 dm. tall.

Leaves sessile, pointed and often mottled.

Flowers sessile; petals recurved, and with purplish, narrow bases; petals much longer than stamens.

Specific epithet and common names both refer to flower color.

UVULARIA GRANDIFLORA Bellwort

Y 3-4

Usually found only in rich soils.

Stem glaucous, arching, often forked above and bearing bladeless sheaths below; to 7.5 dm. tall.

Leaves surround stem, at base; usually white-hairy below.

Inflorescence of 1 to few pendulous flowers.

Flowers perfect; perianth segments glabrous; stamens longer than divided style.

Generic name refers to pendulous flowers as similar to uvula on the human palate; specific epithet Lat., "large flowered"; common name refers to shape of flower on this "wort", old English for plant.

B-R 7-9

VERATRUM WOODII False Hellebore

Rich woodlands, particularly on north or east-facing alkaline slopes.

Stem slender, sparingly leafy, to 14 dm. tall; plant monoecious.

Basal leaves sheathing, broad; smaller upper leaves not sheathed.

Narrow, terminal panicle of imperfect flowers.

Flowers only infrequently, often not for many years; flowers imperfect; otherwise, typical family characters.

W 5-8

YUCCA SMALLIANA* Adam's Needle or Spanish Bayonet

Cultivated plant, commonly found as garden escape along roads, etc.

Unbranched stem to 4 m. tall, very leafy at base.

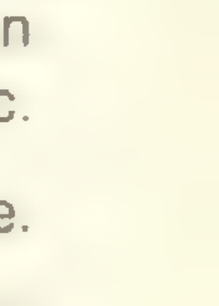
Basal leaves stiff, narrowed towards top into sharp spine; flat; 2-4 cm. broad; margins with twisting fibers.

Inflorescence: branched panicle, covered with short hairs.

Flowers showy, to 5 cm. long; otherwise, typical family characters.

Both common names refers to spines on leaves.

LINACEAE Flax Family



Herbaceous plants; leaves usually alternate, entire and simple.

Flowers regular, perfect, hypogynous, 4-5 merous; styles free; stamens united at base.

Y or B 5-9

LINUM Flax

4 species in our area, 3 with smallish, yellow flowers; the 4th, **L. usitatissimum,** from which are made both linen and linseed oil, with slightly larger, blue flowers.

Leaves simple, sessile, entire, exstipulate.

Many flowers, in axils of reduced leaves, on branches towards top of plant.

Flowers 5-merous, with typical family characteristics.

LOASACEAE - LOGANIACEAE

LOASACEAE Loasa Family

Herbaceous plants with rough or stinging hairiness.

Leaves exstipulate.

Flowers regular, perfect, epigynous, usually 5-merous, with many stamens.

MENTZELIA OLIGOSPERMA Stick Leaf

Y 5-9

Exposed ledges of south or west facing alkaline bluffs, glades or other open areas.

Much-branched, straw-colored, erect stems, armed with stiff, barbed hairs; to 9 dm. tall.

Leaves alternate, coarsely toothed, often petioled; adhesive due to barbed hairs.

Flowers solitary, axillary or terminal; to 12 mm. long; apricot yellow, and opening only on sunny days.

Specific epithet, Lat., "few-seeded"; (but we don't recommend your attempting to see this for yourselves; the capsules are also armed with barbed hairs).

LOGANIACEAE Logania Family

Herbaceous in our area.

Leaves opposite, simple, stipulate.

Flowers regular, perfect, hypogynous; calyx and corolla both tubular.

SPIGELIA MARILANDICA Pink Root

R 5-8

Low or wet wooded areas.

4-angled stems glabrous, or nearly so; to 7 dm. tall.

Leaves opposite, sessile.

Inflorescence: terminal, peduncled spike, with flowers on only one side.

Flower scarlet outside, the corolla yellow within, its reflexed lobes therefore appearing to be yellow; 5-merous.

LYTHRACEAE Loosestrife Family

Herbs or shrubs.

Leaves usually opposite, simple, entire, and without stipules.

Inflorescence: racemes, each flower subtended by a bract.

Flowers perfect; petals crumpled and soon falling; usually regular; ovary superior, with 1 stigma.

1 Stem with sticky hairs; petals 6, unequal; flower irregular . . . **Cuphea**

1' Stem without sticky hairs; petals equal; flower regular, or nearly so

2 At least some of upper leaves alternate . . . **Lythrum**

2' All leaves opposite . . . **Rotala**

CUPHEA PETIOLATA Clammy Cuphea or Blue Waxweed

P-V 7-10

Found in a variety of open areas; odor of tar or coconut.

Erect, sparingly branched, sticky-hairy plant to 6 dm. tall; stems reddish.

Leaves opposite, sticky-hairy, simple, entire and long-petioled.

Flowers solitary or paired in upper axils; short-pedicelled.

Flower irregular, 6-merous; calyx nearly 1 cm. long, strongly ribbed, swollen at base; 2 petals larger than the other 4.

Generic name Gr., "gibbous" from shape of calyx; specific epithet from petioled leaves; common names for obvious reasons.

LYTHRUM ALATUM Winged Loosestrife

P 6-9

Swampy meadows and other wet, open areas.

Erect, glabrous, loosely branching plant with 4-angled, winged stem; slender and to 1.5 m. tall.

Leaves thickish, oblong, crowded on branches; those at top alternate.

Flowers solitary in most of upper axils.

Generic name Gr., "color of blood"; specific epithet and common name both refer to stem.

ROTALA RAMOSIOR **Tooth-cup**

P or W 6-10

Wet areas.

Low, glabrous, branchy plant to 4 dm. long or tall (but usually only 2 dm.).

Leaves opposite, narrow, tapering at base; usually blunt at tip.

Flowers usually solitary, rarely to 3, at base of leaves.

Flowers 4-merous, inconspicuous, the minute petals soon deciduous.

Specific epithet Lat., "very branching"; common name probably refers to shape of calyx.

MALVACEAE Mallow Family

Herbs or shrubs, with mucilaginous sap.

Leaves alternate, stipulate and usually palmately veined; simple.

Flowers perfect, regular, 5-merous, hypogynous; stamens with filaments joined in tube around the style.

A member of this family, the European **Althaea officinalis**, is commonly known as marsh mallow, the mucilaginous sap of its root being formerly the basis of the candies so familiar in this country.

1 Some or all leaves lobed; calyx subtended by 6 or more linear bracts . . . **Hibiscus**

1' None of leaves lobed

2 Leaves as broad as long (some at least 3 cm. wide)

3 Calyx not subtended by bracts . . . **Abutilon**

3' Calyx subtended by 6 or more bracts . . . **Hibiscus**

2' Leaves longer than broad (less than 3 cm. wide)

4 Calyx subtended by 2-3 bristly bracts . . . **Malvastrum**

4' Calyx not subtended by bracts . . . **Sida**

ABUTILON THEOPHRASTI* **Velvet Leaf**

Y 6-10

Weedy plant of open areas.

Stem stout, branched, soft-hairy, to 12 dm. tall.

Leaves roundish, with cordate base, velvety, pointed, almost entire, petioled.

Flowers solitary on axillary peduncles; to 25 mm. across.

HIBISCUS

Herbs or shrubs, with large, showy flowers.

5-lobed calyx subtended by circle of numerous bracts; stamens joined around style bear anthers at different levels; 5 stigmas.

1 Low plant, no taller than 5 dm. . . . **H. trionum**

1' Plants 1-6 m. tall

2 Leaf blades hairy on both sides . . . **H. lasiocarpus**

2' Leaf blades glabrous . . . **H. militaris**

HIBISCUS LASIOCARPUS Rose Mallow

W or P 7-10

Wet areas.

Hairy stemmed plant, to 2 m. tall.

Leaves ovate, soft-hairy on both sides; alternate, pointed, rounded at base, serrate, long petioled; rarely slightly lobed.

Flowers long-peduncled; corolla to 20 cm. wide; petals dark red or purple at base; axillary.

Specific epithet Lat., "hairy-fruited".

HIBISCUS MILITARIS Rose Mallow

P 7-10

Wet areas.

Glabrous stemmed plant, to 2 m. tall.

Leaves often 3-lobed, the terminal lobe much the largest, and long-pointed; glabrous; petioled.

Flowers long-peduncled; petals pink, darker at base, to 8 cm. long.

MALVACEAE

HIBISCUS TRIONUM* Flower-of-an-hour

Y 6-9

Weedy plant of open areas.

Stems branched from base, more or less hairy, to 5 dm. tall.

Leaves deeply 3-parted; segments narrow, coarsely toothed; long petioled.

Flowers long-peduncled; petals pale yellow, purple at base, to 4 cm. long; calyx 5-angled, becoming inflated; flowers remain fresh for a few hours only, hence the common name.

MALVASTRUM HISPIDUM Yellow False Mallow

Y 7-9

Rocky, open areas.

Slightly hairy plant to 5.5 dm. tall; branched.

Leaves narrow, with scattered, fine teeth.

Flowers grouped or solitary in axils of upper leaves; short peduncled.

Petals yellow, scarcely longer than calyx, the latter subtended by 2-3 bristly bracts.

(This plant will be found in many books under the name **Sphaeralcea angusta**, the slender globe mallow, the "globe" referring to the usually spherical fruit).

SIDA SPINOSA* Prickly Mallow

Y 6-10

Weedy plant of open areas.

Much branched, softly hairy, to 1 m. tall.

Leaves oblong, serrate, long-petioled; often a soft-spiny protruberance at base of leaves.

Flowers solitary on axillary peduncles, shorter than petioles of subtending leaves.

Petals pale yellow, to 6 mm. long.

Both specific epithet and common name exaggerate the strength of protruberances at base of leaves.

MENISPERMACEAE Moonseed Family

Woody, climbing vines; dioecious.

Leaves alternate, simple, broad, palmately veined or lobed, without stipules.

Flowers very small, in slender, often axillary inflorescences; tepals in 3-4 whorls; imperfect, hypogynous; regular.

Family and common names both refer to crescent shape of seeds within the fruit.

MENISPERMUM CANADENSE Moonseed

W-G 5-7

Low, moist woods, thickets, fencerows.

Woody climber, sometimes 4 m. long.

Leaves lobed, attached to long petioles near, but not at, their bases (i.e., the petiole attachment is unusual, being within the margin of the leaf).

Flowers in long-peduncled axillary cluster.

Pistillate flowers with several pistils and incomplete stamens; staminate with 12-14 stamens, as long as sepals.

Generic and common names: see family description.

NYCTAGINACEAE Four-o-clock Family

Herbs with stems swollen at joints.

Leaves opposite, entire, simple and without stipules.

Flowers showy, without corolla, but with petal-like calyx; 1 long style; stamens few and often of unequal length.

Common name refers to fact that family members often bloom only during late afternoon and evening.

MIRABILIS NYCTAGINEA Wild Four-o-clock

P 5-10

Waste areas, but usually in rich soil.

Smooth stem, repeatedly forked, to 1.5 m. tall.

Leaves ovate, with rounded or cordate bases; the larger ones petioled.

Inflorescence: several flowers clustered in originally green bracts, becoming thin and more or less translucent.

Flowers pedicelled; family characteristics.

Generic name Lat. "wonderful" probably applies to fact referred to in common name: that flowers do open at 4 o'clock.

NYMPHAEACEAE Water Lily Family

Aquatic plants, with large leaves on long petioles.

Flowers solitary, showy, on long peduncles; perfect, regular; perianth of 5 to many tepals; often fragrant.

NELUMBO LUTEA American Lotus

Y 6-9

Lakes, ponds, etc., in quiet water.

Leaves stand at least 4 dm. above surface, sometimes much more; bowl shaped, or like giant saucers, to 7 dm. broad; petiole attached in center.

Flowers with family characters, the tepals to 100 mm. long and numerous; to 25 cm. wide.

Specific epithet Lat., "yellow"; common name differentiates this native species from the sacred lotus, the pink-flowered **N. nucifera** of the Orient.

NUPHAR LUTEUM Yellow Pond or Water Lily or Spatterdock

Y 5-10

Borders of streams, ponds, etc.

Leaves usually held above water on petioles attached at base between 2 lobes.

Flowers with family characters, the 5-6 perianth parts somewhat differentiated, stiff, upright; flowers to 5 cm. wide.

Specific epithet Lat., "yellow"; common name is said to refer to similarity to a dock-like plant (see **Rumex**) that scatters its seeds, but we do not agree.

OLEACEAE Olive Family

Woody plants with opposite leaves.

Flowers often imperfect, regular, hypogynous, 4-merous, but with only 2 stamens.

FORESTIERA ACUMINATA Swamp Privet

Y 3-4

Low, wet areas along streams.

Shrubby plant or small tree, with smooth, gray bark; short, lateral branches sometimes ending in thorns; to 3 m. tall.

Leaves opposite, simple, thin, glabrous, tapering at both ends.

Flowers clustered in axils of last year's leaves, unisexual and the sexes on different trees; the staminate in dense, nearly sessile, lateral groups; the pistillate in panicles 1-2 cm. long; both kinds appear before the leaves.

Flowers without petals, and only minute calyx.

Specific epithet Lat., "with tapering tip" refers to leaves; common name to habitat and to resemblance to the closely related common privet.

ONAGRACEAE Evening Primrose Family

Herbaceous plants with simple leaves, usually without stipules.

Flowers regular, perfect, 4-merous; epigynous (flowers of this family have almost incredibly inferior ovaries); the stigma often large and lobed.

1 Leaves opposite

2 Leaves entire . . . **Ludwigia**

2' Leaves toothed

3 Petioles 10-50 mm. long . . . **Circaea**

3' Petioles no longer than 5 mm. . . . **Epilobium**

1' Leaves alternate or basal

4 Calyx tube does not extend beyond ovary

5 Petals pink to whitish . . . **Epilobium**

5' Petals yellow or greenish . . . **Ludwigia**

4' Calyx tube prolonged beyond ovary

6 Petals yellow . . . **Oenothera**

6' Petals white or pink

7 Petals more than 1 cm. long . . . **Oenothera**

7' Petals less than 1 cm. long . . . **Gaura**

ONAGRACEAE

CIRCAEA QUADRISULCATA Enchanter's Nightshade

W 6-8

Rich woods and thickets.

Stem firm, glabrous below, slightly hairy above; to 1 m. tall.

Leaves opposite, petioled (these to 50 mm. long); toothed.

Inflorescence: many-flowered raceme.

Flowers with petals to 3.5 mm. long.

Generic and common names both refer to Circe, the enchantress, for reasons that remain unknown to us; specific epithet Lat., "4-furrowed" refers to bristly, furrowed fruit.

EPILOBIUM COLORATUM Willow Herb

P-W 7-10

Wet areas, especially in alkaline soil.

Stem bushy-branched and minutely hairy above; glabrous below; 4-angled; to 1 m. tall.

Leaves narrow, sharply toothed, red-veined, short petioled.

Flowers numerous, the petals to 5 mm. long.

Generic name Gr., "upon the capsule" refers to floral parts attached to the top of the ovary; hence the ovary and capsule are inferior. Specific epithet refers to red-veining of leaves; common name to similarity of these leaves to those of willows.

GAURA BIENNIS Biennial Gaura

W 6-10

Open areas of various sorts.

More or less hairy-stemmed plant to 1.5 m. tall.

Leaves alternate, entire, wavy or slightly toothed, narrowed at both ends; often with bundles of smaller leaves in the axils.

Inflorescence terminal and branched, each branch a many-flowered spike.

Flowers with white petals to 5 mm. long, turning pink or red with age.

Generic name Gr., "superb" hardly seems appropriate to this small-flowered plant; specific epithet obvious, as is common name.

LUDWIGIA ALTERNIFOLIA Seedbox

Y 6-8

Wet areas.

Erect, branched, mostly glabrous plant, to 1 m. tall.

Leaves alternate, lanceolate, pointed at both ends, petioled.

Flowers *short-pedicelled*, their petals equalling green calyx lobes.

Specific epithet Lat., "alternate-leaved"; common name refers to cubical fruit.

LUDWIGIA PEPLOIDES Floating Primrose Willow

Y 5-10

Muddy margins of slow streams, or in shallow water.

Creeping or *floating stems* root at the nodes; glabrous or nearly so.

Alternate leaves narrowed to short petioles; glabrous or nearly so.

Flowers axillary, *long stalked* (the mature peduncles to 8 cm. long); 5-merous.

Specific epithet Lat., "creeping"; common name for habit and supposed similarities.

OENOTHERA Evening Primrose

Herbaceous plants with alternate, usually narrow leaves.

Flowers large, solitary in axils or in terminal racemes.

Flowers 4-merous, stamens 8; stigma cross-shaped; calyx lobes usually reflexed; petals of yellow-flowered species often becoming red on wilting.

Common name refers to presumed similarity to the primrose, combined with fact that flowers open in late afternoon, and last only until the following morning.

1 No leaves broader than 1 mm. . . . **O. linifolia**

1' All leaves broader than 1 mm.

2 Petals white . . . **O. speciosa**

2' Petals yellow

3 Stems sprawling; flower petals 3-7 cm. long . . . **O. missouriensis**

3' Stems erect; flower petals 0.5-3.5 cm. long

OENOTHERA **Evening Primrose** (con't.)

4 Flowers several to many in terminal racemes . . . **O. biennis**

4' Flowers few, sessile in axils of upper leaves . . . **O. laciniata**

OENOTHERA BIENNIS Evening Primrose

Y 6-10

Fields, glades and other open areas.

Stems often suffused with red and somewhat angled above; stout, sometimes hairy, often branching above, to 2 m. tall.

Leaves entire to slightly toothed and/or wavy on margin; glabrous to sparsely hairy.

Inflorescence: several to many flowers in terminal raceme, the bracts similar to leaves, but much smaller.

Petals 1-2.5 cm. long.

Names: see generic description.

OENOTHERA LACINIATA

Y 5-10

Plant of waste areas.

Stems simple or branched from base, hairy.

Leaves wavy, pinnately-lobed; sometimes hairy on upper surface.

Flowers in axils of upper leaves; sessile.

Petals 0.5-1.8 cm. long.

Specific epithet Lat., "slashed", refers to leaves.

Y 5-7

OENOTHERA LINIFOLIA Sundrops

Rocky glades, prairies, fallow fields, in acid soil.

Slender, branched stems to 4.5 dm. tall.

Glabrous leaves narrowly linear, less than 1 mm. wide, numerous.

Flowers borne in long terminal racemes.

Yellow petals 3-5 mm. long, subtended by a pair of reflexed 1-2 mm. long bracts; filiform calyx tube 1-2 mm. long; stigma lobes 1 mm. broad.

Specific epithet refers to flax-like leaves (see **Linum**).

Y 5-8

OENOTHERA MISSOURIENSIS Missouri Primrose or Glade Lily

Rocky, open areas, as limestone glades; species of limited distribution, native only in Missouri, Kansas and Texas.

Stems short and leafy, often whitish with dense hairs; sprawling.

Leaves entire, petioled, alternate.

Flowers from leaf axils, actually sessile, but seemingly peduncled as calyx tube is almost unbelievably long: 5-12 cm.

Flowers extremely showy, perhaps the showiest of all the wildflowers in our state, with petals 3-6 cm. long; these flowers appear in successive axils of leaf-petioles, each lasting from one late afternoon until the following morning.

W-P 5-7

OENOTHERA SPECIOSA White Evening Primrose

Variety of open areas.

Stems and branches slender, soft-hairy, to 6 dm. tall.

Narrowish leaves, wavy or slightly toothed above, much more so in lower half, where they tend to become pinnately lobed.

Flowers few to several in upper leaf axils, the buds nodding.

OENOTHERA SPECIOSA White Evening Primrose (con't.)

White petals 2-4 cm. long.

Specific epithet Lat., "showy".

ORCHIDACEAE Orchid Family

Herbaceous monocots: in the tropics many are epiphytes, but ours are all firmly rooted in the ground, where they establish mutually beneficial arrangements with certain fungi.

Leaves parallel veined; often basal, but their arrangement very diverse.

Flowers perfect, very irregular, 3-merous; one of the petals always differing from other 2, and called the "lip"; epigynous; stamens united with style to form the "column" which bears both the stigma and anthers. Cypripedium has 2 fertile anthers, the other genera only 1.

1 Plants with no leaves at flowering time

2 Flowers white, inflorescence twisted . . . **Spiranthes**

2' Flowers of other colors, inflorescence not twisted

3 Sepal 10-15 mm. long, lip 10-12 mm. long . . . **Aplectrum**

3' Sepals 3-8 mm. long; lip 2.5-6 mm. long . . . **Corallorhoriza**

1' Plants with leaves present at flowering time

4 Only 1 well developed leaf

5 Single leaf basal . . . **Aplectrum**

5' Single leaf half way up flowering stem . . . **Malaxis**

4' 2 or more well developed leaves

6 5-6 (rarely 10) leaves whorled near top of stem . . . **Isotria**

6' Leaves all basal and/or alternate

7 All leaves basal

8 Leaves 0.3-1.5 cm. wide; flowers sessile . . . **Spiranthes**

8' Leaves 2-7 cm. wide; flowers pedicelled

9 Upper half of flower purplish; lip white; leaves dark green . . . **Orchis**

9' Flowers differently colored; leaves olive or grass-green . . . **Liparis**

7' Leaves alternate

10 Numerous flowers, spirally arranged; lip small . . . **Spiranthes**

10' Flowers 1-3; lip inflated . . . **Cypripedium**

APLECTRUM HYEMALE Adam and Eve Orchid or Putty Root

P-V 5-6

Low areas with rich soil.

Stem stout, 3-4.5 dm. tall, with bladeless sheaths.

Leaves non-existent during summer; in early autumn 1 large, petioled, and many-veined leaf produced; this remains green throughout winter but has usually shrivelled and dropped off by flowering time.

Loose raceme of 8-20 flowers, each about 1 cm. long, in lurid colors, develops in May.

Generic name describes flowers as being "unspurred"; specific epithet, Lat., "winter" refers to evergreen leaf; 1st common name to new plants produced by underground stem, referring them to Eve, produced from Adam's rib. Second common name refers to putty-like matter (once used in the mending of ceramics) produced in underground stem.

CORALLORHIZA ODONTORHIZA Coral Root

W and P 8-10

Wooded areas, often in acid soil.

Saprophytic plant essentially without green color; stem purple to brown (sometimes a little greenish above or yellowish); to 3 dm. tall.

Leaf-like parts represented by a few sheathing scales towards base of stem.

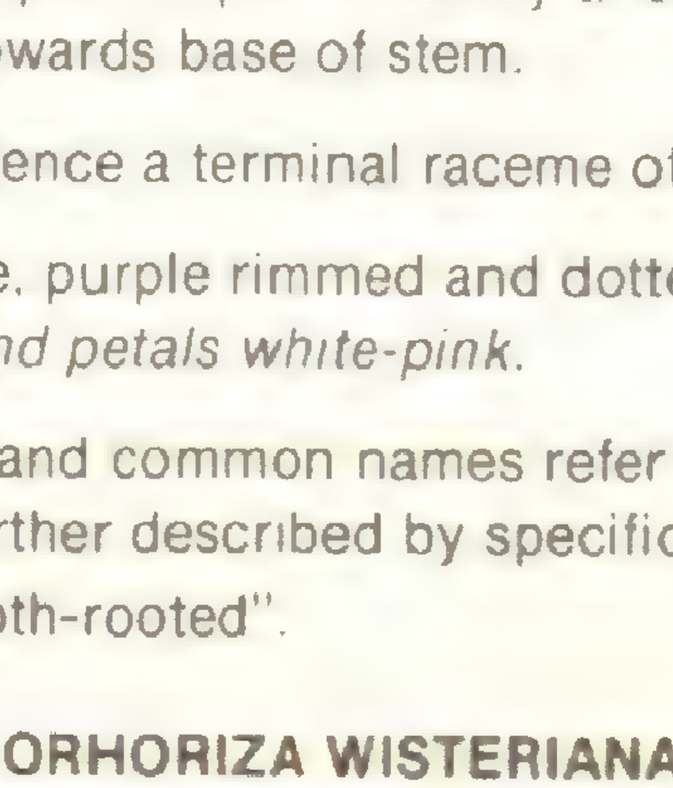
Inflorescence a terminal raceme of 5-15 flowers.

Lip white, purple rimmed and dotted; *not notched; sepals and petals white-pink.*

Generic and common names refer to shape of roots, further described by specific epithet, Lat., "tooth-rooted".

CORALLORHORIZA WISTERIANA Coral Root

G-Y 2-6



Rich or rocky open areas.

Saprophytic plant, essentially without green color; stem purple or reddish, to 4.5 dm. tall, commonly curving towards summit.

Leaves represented by a few sheathing scales towards base of stem.

Inflorescence: terminal raceme of 10-15 flowers; lip white with purplish dots, *notched; sepals and petals greenish yellow.*

For generic and common names, see above.

ORCHIDACEAE

CYPRIPEDIUM CALCEOLUS Yellow Lady-slipper

Y 4-6

Most frequently found on upper levels of steep north or east facing slopes in oak-hickory or pine-oak forests.

Stem leafy, to 8 dm. tall, hairy.

Leaves alternate, more or less sheathing.

1 or 2 terminal flowers.

Long lateral petals narrow and usually twisted; these and sepals brownish-purple, or greenish-yellow; lip yellow, often veined with purple.

Scientific and common names both refer to resemblances of flower's sack-like lip to a small slipper.

ISOTRIA VERTICILLATA Large Whorled Pogonia

G-Y 5

A very rare plant, found only in sandy, acid soil, often under a cover of pine and oak trees.

Flowering stem to 3.7 dm. tall.

Leaves present only in whorl just under the single (rarely 2) flower.

Sepals very narrow, dull brown-purple above, yellow-green below; lateral petals yellow-green, the lip with large white lobe, and striped, smaller, lateral lobes.

Generic name Gr., "3 equal" for sepals of like size; specific epithet refers to leaves, common name to related genus.

LIPARIS LILIFOLIA Lily-leaved Twayblade

P 5-6

Acid soils in woods, often on leached upper slopes.

Leafless flowering stem to 3 dm. tall.

2 basal leaves oval to elliptic; shiny; olive or grass green.

5-30 flowers in loose raceme, their pedicels to 10 mm. long and widely spreading.

Sepals greenish white, to 2 mm. broad; lateral petals project forward from under lip, and are

LIPARIS LILIFOLIA Lily-leaved Twayblade (con't.)

often crossed; lip pale purple.

Generic name Gr., "shining" refers to lustrous leaves; specific epithet Lat., tells us that these leaves are similar to those of the lily, and common name adds that there are only 2 of them.

MALAXIS UNIFOLIA Adder's Mouth

G 5-6

Various areas, often in acid soil.

Diminutive plant, usually to only 15 cm. tall.

Single, unstalked, oval leaf half way up stem.

Tiny flowers with thread-like lateral petals in loose raceme.

Generic name refers to plant as delicate; specific epithet Lat., "1-leaved"; common name from presumed likeness of flower to open mouth of a venomous snake.

ORCHIS SPECTABILIS Showy Orchid

W and P 4-6

Rich moist woods, in deep leaf-mold; very rare.

Stem 4-5 angled, thick, to 3 dm. tall.

2-3 thick, large, glossy basal leaves.

Inflorescence:3-6 flowered spike; each flower subtended by large, green bract.

Lip white, extended into hollow spur; mauve hood formed by lateral petals and sepals; fragrant.

Generic name Gr., "testicle" refers to paired tubers of some species, and accounts for early belief that plants are aphrodisiac.

SPIRANTHES CERNUA Nodding Ladies Tresses

W 8-11

Rocky or open areas, in alkaline soil.

Slender plant to 10 dm. tall.

Longish, narrow, thick, firm, pale green basal leaves sometimes present; stem leaves reduced upwards, finally to sheathing, overlapping scales.

Inflorescence: rather dense spike of *2-3 irregular series of flowers*, twisting around it; *slightly hairy*.

Flowers creamy white, with vanilla-like scent; bent downwards.

Generic name Gr., "coiled or spiralled flower" refers to inflorescence; specific epithet Lat., "nodding" from downward arching of flowers; common name to same character, plus the braided appearance of twisted series of flowers on the inflorescence.

SPIRANTHES LACERA Slender Ladies Tresses

G-W 8-10

Dry, acid soils in oak-hickory or pine-oak woodlands; ridges, etc.

Slender flowering stem to 5.3 dm. tall.

Thinnish basal leaves sometimes present; stem leaves reduced to small scales.

Inflorescence: flowers in *single spiralling series*, or all on 1 side; *glabrous*.

Flowers white, lip with a green center.

See above for generic and common names; specific epithet Lat., "irregularly cleft" refers to fringed margin of lip.

OROBANCHACEAE Broom-rape Family

Herbaceous plants parasitizing the roots of others, and hence not green.

Plants often fleshy, yellow or brownish, the "leaves" reduced to scales.

Flowers usually perfect, hypogynous, somewhat irregular.

Family name Gr . "strangle vetch" from some species that parasitzes **Vicia**; common name refers "to a species that parasitzes **Genista**, the broom".

OROBANCHE UNIFLORA **Cancer Root**

W-V 4-6

Woody slopes, glades or other areas with acid soil, where plant parasitizes oaks, asters, goldenrods, etc.

Stem very short, bearing several scales (vestigial leaves) at ground level, and 1-4 leafless, colorless, one flowered, hairy peduncles; to 20 cm. tall.

Flowers: calyx about 1/2 as long as corolla, regular, 5-lobed, hairy; corolla with twisted tube and 5 rounded, not quite equal lobes.

Generic name: see family; specific epithet refers to single-flowered peduncles; common name refers to these plants growing on the roots of others.

OXALIDACEAE Wood Sorrel Family

Low herbaceous plants with sour, watery sap.

Leaves delicate, alternate or basal and apimately trifoliolate.

Flowers perfect, regular, hypogynous, 5-merous.

Family name Gr., "sour", refers to taste of sap; as does common name, derived from Old French.

OXALIS STRICTA **Yellow Wood Sorrel**

Y 3-10

Various open areas or, as common name implies, in openly wooded areas; also commonly found in lawns.

Erect stem, more or less hairy, to 5 dm. tall.

Leaves alternate, the leaflets to 2 cm. broad; long petioled.

Inflorescence: umbelliform, 3 flowers (rarely more) per peduncle, the pedicels hairy; axillary and/or terminal.

Yellow petals sometimes reddish at base.

Generic name: see family description; specific epithet Lat., "stiff".

OXALIDACEAE - PAPAVERACEAE

OXALIS VIOLACEA Violet Wood Sorrel

V 3-7 and 9-11

Various open areas, usually in acid soil.

Stemless, nearly glabrous plant; leaves and leafless flower stalks all arising from base.

Flower stalks to 2 dm. tall, much exceeding the long-petioled leaves; several pedicelled *violet flowers.*

For names: see above.

PAPAVERACEAE Poppy Family

Herbaceous plants with milky or colored sap.

Leaves simple, but sometimes deeply lobed; petioled.

Flowers usually solitary, showy; regular, perfect, with many stamens, petals 4-6 or more, the 2 sepals soon deciduous.

SANGUINARIA CANADENSIS Bloodroot

W 3-4

Usually in low, rich, alkaline soils.

Stemless plant producing 1 basal leaf and 1 long-peduncled flower; glabrous and glaucous (especially when young).

Single leaf, 3-9 palmately lobed, emerges wrapped around peduncle but opens to 2.8 dm. broad and 4 dm. tall, eventually over-topping the fruit.

Single white flower; usually 8 petals of which 4 are longer; 24 stamens surround single pistil; flowers showy, fragrant and short-lived.

Generic and common names both refer to plant's blood-red sap.

STYLOPHORUM DIPHYLLUM **Wood or Celandine Poppy**

Y 4-6

Rich woods, alluvial areas, etc.

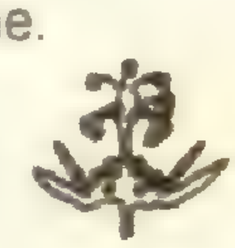
Lower stem with no or few leaves; upper stem with (usually) 2 opposite leaves near summit; sap orange-yellow; to 5 dm. tall.

Several basal leaves pinnately deeply lobed into 5-7 toothed segments; long petioled; stem leaves similar, but smaller.

Inflorescence: solitary or few-flowered umbel.

Flower yellow with 2 hairy sepals, 4 yellow petals and long style.

Generic name Gr., "long style"; specific epithet refers to 2 opposite stem leaves; "celandine" refers to similarity to other plants given this name.



PASSIFLORACEAE **Passion-flower Family**

Herbaceous vines in our area, climbing by tendrils.

Leaves alternate, palmately lobed, stipulate and petioled, the tendrils developing in leaf axils.

Flower perfect, regular, hypogynous, 5-merous; calyx fringed on inside; stamens with filaments united and sheathing the style.

Family and common names both based on floral structures conceived as symbols of the Passion of Christ by a 17th century author of an exhaustive treatise on the "Cross of Calvary"; 10 petals as representing the apostles present at the crucifixion, the fringe on the calyx, the crown of thorns; the stamens, Christ's 5 wounds; the stigmas, the nails piercing His hands and feet; the tendrils, the whips used by Christ's persecutors, whose hands are represented by the palmately lobed leaves!

PASSIFLORA INCARNATA **Passion Flower or Maypops**

W-P 6-9

Sandy fields, low moist woods or open, waste ground.

Hairy plant with stems climbing or trailing, to 8 m. long.

Leaves deeply 3-lobed, the lobes pointed and somewhat toothed.

Flowers *large*, to 8 cm. across and 4 cm. long; petals and sepals white, with purple or pink fringe.

Generic name: see family description; specific epithet Lat., "flesh-colored" refers to fringed calyx; 2nd common name to edible fruit (although this does not ripen before July).

PASSIFLORA LUTEA **Yellow Passion Flower**

G-Y 6-9

Mostly in wooded areas or thickets.

Slender stem *slightly hairy, when young;* climbing or trailing; to 3 m. long.

Leaves *shallowly 3-lobed, the lobes broadly rounded, entire.*

Flowers *small,* to 2.5 cm. across and 1.2 cm. long.

Generic name: see family description; specific epithet refers to flower color.

PHRYMACEAE Lopseed Family

Herbaceous plants with simple, opposite, serrate, petioled leaves.

Inflorescence: terminal and axillary, elongate, peduncled, interrupted spikes.

Flowers perfect, hypogynous, irregular, 5-merous.

Source of family name unknown; common name refers to drooping fruit.

PHRYMA LEPTOSTACHYA **Lopseed**

P 6-9

Usually in rich woodlands.

Smooth or slightly hairy stem, simple or with a few branches, to 10 dm. tall.

Leaves bright green, sparingly hairy, thin, the lowest with petioles to 5 cm. long, reduced upwards; topmost leaves often sessile; otherwise all share family characters.

Inflorescence and flowers with family characteristics.

Generic and common names: see family descriptions; specific epithet Lat., "slender spiked".

PHYTOLACCACEAE Pokeweed Family

Leaves alternate, entire, petioled.

Inflorescence: raceme or spike.

Flowers usually perfect, regular, hypogynous; no corolla; calyx of 4-5 separate sepals.

Family name: Lat., "crimson-lake plant", refers to crimson juice of berries; common name said to be from Algonquin Indian word for "plants used in dyeing or staining".

PHYTOLACCA AMERICANA Pokeweed

W-P 5-10

Open or waste areas and thickets.

Smooth plant, to 3 m. tall; branched above; coarse; glabrous; with an unpleasant odor.

Leaves oblong to ovate; to 3 dm. long, the petioles to 5 cm. long.

Greenish-white flowers, sometimes suffused with pink on peduncled raceme, to 2 dm. long; stamens and styles 10; ovary green.

Fruit a raceme of dark purple berries.

Generic and common names: see family description.

PLANTAGINACEAE Plantain Family

There is only one genus of this family in Missouri, the common, weedy plantains, of which there are 11 species in the state, 6 common in our area.

PLANTAGO Plantain

W-G 4-11

Leaves all basal, and parallel veined (even though these are dicots).

Inflorescence, borne on leafless stalk, a many-flowered spike.

Flowers individually inconspicuous; recognizable by their single, hairy stigmas and 4, long, protruding stamens.

POLEMONIACEAE

POLEMONIACEAE Phlox Family

Herbaceous plants.

Flowers regular, perfect, hypogynous, 5-merous.

PHLOX

Leaves opposite, sessile, unlobed.

Inflorescence: terminal and/or axillary cymes.

Flowers showy, the calyx and corolla both tubular; stamens of different lengths; 3 stigmas.

1 Dark green, leafy, non-flowering shoots spread from base of plant and often root at nodes . . . **P. divaricata**

1' All shoots upright

2 Leaves with plainly visible side veins, joined at leaf margin; 10-60 mm. broad . . . **P. paniculata**

2' Leaves with indistinct or no side veins, chiefly 3-15 mm. broad

3 Inflorescence long and narrow, its lower branches shorter than upper; stem usually red-dotted; smooth above . . . **P. maculatum**

3' Inflorescence flat or rounded; plant hairy . . . **P. pilosa**

PHLOX DIVARICATA Blue Phlox or Wild Sweet William

B 3-6

Rich, usually wet, woods.

Stems rise from spreading, prostrate base; slender, upright stems to 5 dm. tall.

Leaves opposite, entire, few, sessile, sparsely hairy.

Inflorescence loosely branched, the floral pedicels to 10 mm. long.

Flowers with densely hairy calyx, glabrous corolla, flaring lobes of the latter usually notched.

Specific epithet Lat., "strongly divergent" refers to branching of inflorescence; second common name very misleading (as common names often are); the garden sweet william is a totally unrelated **Dianthus** (which see).

P 5-10

PHLOX MACULATA Meadow Phlox

Wet, open areas fed by alkaline springs.

Stem usually simple, spotted with red; to 8 dm. tall.

Leaves opposite, sessile, unlobed, the lower narrower than those above.

Inflorescence: densely short-hairy; long and narrow, its lower branches shorter than upper.

Flowers short pedicelled; calyx usually glabrous.

Specific epithet Lat., "spotted" refers to stem.

P 7-10

PHLOX PANICULATA Perennial, Garden or Summer Phlox

Moist or rich low woods, gravel bars, etc.

Glabrous stemmed plant (sometimes short-hairy above), often growing in clumps; to 2 m. tall.

Leaves opposite (upper sometimes alternate), sessile (upper sometimes short-petioled), unlobed; margins of young leaves bristly-hairy.

Inflorescence often large, of several panicled cymes; densely short-hairy; flowers short pedicelled.

Corolla tube sparsely hairy; at least 1 stamen protrudes (not shown in illustration); anthers cream-colored.

Specific epithet refers to inflorescence; as 1 common name indicates, this species is the progenitor of our garden plants.

P or W 4-7 & 10-11

PHLOX PILOSA Downy Phlox

Open woods, sandy soils, glades, thickets, etc.

Stems usually soft-hairy, to 7 dm. tall.

Leaves opposite, sessile, unlobed; narrowish and ending in sharp point.

Inflorescence flat or rounded, loosely branched, each branch conspicuously stalked, flowers usually pedicelled, these and the calyx copiously hairy.

POLEMONIUM REPTANS Jacob's Ladder

V-B 3-4

Rich soil, usually in wooded areas.

Stems in clumps, slender, branched above, to 4 dm. tall.

Leaves alternate, pinnately compound, the basal long petioled, and petioles reduced upwards.

Inflorescence few-flowered, loose and open, the flowers long pedicelled; terminal.

Flowers bell-shaped, lobed corolla to 15 mm. long; stamens white.

Specific epithet Lat., "creeping" which is untrue of this plant; common name refers to pinnately arranged leaflets as ladderlike.

POLYGALACEAE Milkwort Family

Herbaceous plants with alternate or whorled leaves, simple, entire.

Inflorescence: raceme.

Flowers: small, perfect, hypogynous and very irregular — 5 sepals, the 3 outer small, the 2 inner ("wings") much larger and often colored like petals; 3 petals joined together and to tube of joined stamens, the 2 upper similar, the 3rd keel-shaped and with a fringe-like crest.

Family and common name both refer to ancient belief that family members stimulated the flow of milk ("poly", much; "gala", milk).

POLYGALA SANGUINEA

P 5-10

Open areas, usually in acid soil.

Stem very leafy to summit, to 4 dm. tall; slender, solitary.

Leaves *alternate*, very narrow, entire, sessile.

Inflorescence: densely flowered raceme about 1 cm. thick, the flowers tightly overlapping.

Flowers typical of family, the wings glabrous and twice as long as corolla.

Generic name: see family explanation; specific epithet Lat., "blood red" as flowers sometimes are.

POLYGALA VERTICILLATA

W, G-P-V 5-10

Sterile or acid soil, in various sorts of open area.

Branched stem slender, to 4 dm. tall.

At least the lowest leaves *whorled;* narrow, entire, sessile.

Raceme narrowly triangular.

Flowers typical of family.

Specific epithet refers to whorled leaves.

POLYGONACEAE Buckwheat Family

Family of many herbaceous weeds with inconspicuous flowers; usually found in damp areas.

Leaves alternate and simple, their stipules being the simplest way of recognizing family members as they completely surround the stem at its swollen nodes, forming a sort of sheath (the ocrea).

Flowers very small, perianth of 3-6 sepals (no corolla); usually aggregated into conspicuous inflorescence.

Family name means "many joints", referring to swollen nodes; common name refers to the economically important family member, **Fagopyrum.**

POLYGONUM Knotweed or Smartweed

P-W 5-11

14 or more species of this genus flourish in differing habitats in our area; Steyermark lists 16 native, 3 introduced species in Missouri; all share the family characteristics given above and the following generic characteristics.

Inflorescence: flowers in terminal clusters or axillary racemes, each with a pedicel jointed at its summit.

Flowers white, pink, rose or greenish; usually 5 sepals of equal size, even when the plant is fruiting.

Generic name: see family description; common names refer to swollen nodes and to effects on one's mouth after tasting certain of the species.

POLYGONACEAE - PONTEDERIACEAE

RUMEX Sorrel or Dock

G 4-9

Several species of this weedy plant in our area; Steyermark lists 5 native, 7 introduced species in Missouri; coarse plants, often with a cluster of leaves at base.

Greenish (or sometimes red) tiny flowers whorled and crowded on panicled racemes.

Sepals of 2 sorts: the 3 outer green, 3 inner often colored and growing, as the fruit forms, to enclose it.

1st common name means "sour," referring to taste (recommended as a thirst quencher), 2nd common name to long taproot, shaped, apparently, like the solid part of an animal's tail: the dock (a verb, the word is more familiar: we "dock" a dog's tail, and by an extension of this meaning, we also "dock" wages).

PONTEDERIACEAE Pickerel Weed Family

Water or marsh plants; monocots.

Leaves often sheathing at base.

Flowers perfect, hypogynous, 3-merous; 6 tepals united below.

HETERANTHERA DUBIA Water Star-Grass

Y 6-10

Roots in muddy sand or gravel near shallow shores of streams, spring branches, sloughs; tolerant of water in wide temperature ranges.

Often forms long leafy strands; grass-like, branched plant.

Leaves very narrow, sessile, sometimes to 25 cm. long; translucent.

Flower solitary, *pale yellow*, small, star-shaped; *anthers all alike*, with arrow-shaped bases.

Generic name Lat., "different anthers", which applies in some species, but not in this one; common name refers to habitat, shape of flowers and leaves.

HETERANTHERA LIMOSA Mud Plantain

B-W 6-9

Usually found rooted along sides of quiet or slow-moving ditches, ponds, etc. but sometimes grows completely submerged except for flowers.

Leaves long petioled, the blade broad.

Flower solitary, *blue*, its tube to 35 mm. long, expanded portion to 2 cm. wide; *stamens dissimilar.*

Generic name: *see* **H. dubia;** specific epithet, Lat., "of mud"; "plantain" in common name implies a similarity of leaves to those of some species of **Plantago** (which see).

PONTEDERIA CORDATA Pickerel Weed

B 6-10

Swamps, sloughs, and ponds, often in large colonies.

Stem erect, or nearly so, to 10 dm. tall.

Basal leaves and single lower stem leaf similar: long petioled, the blades firm, usually heart-shaped at base.

Inflorescence subtended by bladeless sheath, above single stem leaf; crowded; to 15 mm. long.

Flowers irregular, often white-hairy; upper lobe of perianth marked with 2 yellow spots.

Specific epithet Lat., "heart-shaped" refers to leaf; common name to fact that plant's habitat is a place where pickerel can be caught.

PORTULACACEAE Purslane Family

Herbaceous, often succulent plants.

Leaves simple, usually opposite, entire.

Flowers regular but with the unusual characteristic of having 5 petals and only 2 sepals; open only in sunshine and quickly shriveling.

Source of family and common names eludes us.

1 Usually only 2 leaves, 4-15 cm. long at flowering time . . . **Claytonia**

1' Several to many leaves 0.5-5 cm. long at flowering time

2 Stems leafy; flowers sessile . . . **Portulaca**

2' Leaves all basal; flowers on leafless peduncles . . . **Talinum**

PORTULACACEAE

CLAYTONIA VIRGINICA Spring Beauty

W 2-5

Open areas; woods, meadows, lawns.

Often several flowering stems from base, each with a pair of opposite, sessile leaves; stem often reddish and reclining.

Leaves grass-like; succulent; basal leaves, if present, similar to cauline.

Inflorescence: loose raceme of 5-19 flowers.

Flowers with 2 blunt sepals; 5 petals longer, marked with pink; open only in sunlight.

Common name refers to early flowering time.

PORTULACA OLERACEA* Purslane

Y 6-11

Weedy plant of all sorts of open areas, often forming large mats and difficult to eradicate, as it can take root from a single leaf.

Stem prostrate, fleshy, glabrous, much branched; often purplish.

Leaves thick, fleshy, usually alternate, commonly rounded at tip; shaped like spatulas; to 3 cm. long.

Flowers small sessile or in small terminal clusters.

Generic and common names: see family description; specific epithet Lat., "like a garden vegetable", and so it can be used.

TALINUM CALYCINUM Fame Flower or Rock Pink

R 5-8

Rocky glades and similar areas, often in large colonies.

Succulent plant with narrow, roundish (in cross-section) basal leaves.

Inflorescence: long-peduncled cyme, to 3 dm. tall; branched.

Flowers, *red showy*, the 8-10 petals to 1.3 cm. long; *many stamens*.

Specific epithet Lat., "with large calyx" refers to 2 wide sepals, persistent on the fruit.

TALINUM PARVIFLORUM **Fame Flower or Rock Pink**

W-P 5-8

Level, rocky areas, usually in acid soil.

Succulent plant with narrow, roundish basal leaves.

Flowers *white to pink; stamens mostly 5.*

PRIMULACEAE Primrose Family

Herbaceous plants with simple, exstipulate leaves.

Flowers perfect, regular, hypogynous, usually 5-merous.

1 Leaves all basal

  2 Plant less than 10 cm. tall . . . **Androsace**

  2' Plant usually 15-60 cm. tall . . . **Dodecatheon**

1' Stem leaves present

  3 Flowers red or blue (occasionally white); leaves 1-2 cm. long . . . **Anagallis**

  3' Flowers yellow (occasionally white); leaves 3-15 cm. long . . . **Lysimachia**

ANAGALLIS ARVENSIS* **Pimpernel or Poor Man's Weatherglass**

R or B 5-9

Waste areas, gardens, gravel bars, plant of varied habitats.

Stems usually much branched, square, to 3 dm. tall or long, as growth habit is often prostrate.

Leaves opposite, entire, ovate, sessile, to 2 cm. long.

Flowers solitary on axillary peduncles.

Flowers of variable size: sepals to 4 mm. long, calyx equal or slightly longer

Generic name Gr., "delight again", from habit of flowers closing in cloudy weather, but reopening in sunshine; second common name refers to same characteristic; specific epithet Lat., "of cultivated fields" (or your garden); "pimpernel" eludes us.

PRIMULACEAE

ANDROSACE OCCIDENTALIS

G 3-5

Open areas, usually in alkaline soil.

Dwarf plants, sometimes with many hairy stems from base; to 7 cm. tall.

Leaves all basal, entire or nearly so, stiffly hairy on upper surface; to 15 mm. long.

Inflorescence: terminal umbel, subtended by several whorled bracts, smaller than but similar to leaves.

Flowers with hairy, bright green calyx lobes; corolla to 2.5 mm. wide.

Specific epithet Lat., "western", referring to North American distribution.

DODECATHEON MEADIA Shooting Star

W-P 4-6

Prairies and other open areas.

Single, leafless stem to 5 dm. tall; glabrous.

Leaves basal, tapering to petioles, to 20 cm. long; often marked with red at base.

Inflorescence: umbel of showy flowers, nodding on pedicels.

Flowers 5-merous; corolla lobes reflexed; stamens held together in cone-shaped group by the "collar" formed by the corolla.

Common name refers to unusual shape of flower.

LYSIMACHIA Loosestrife

Y 5-9

Several species in our area share the following characteristics:

Leafy-stemmed, herbaceous plants with entire leaves, opposite or whorled.

Inflorescence axillary.

Flowers in our most common species yellow (sometimes with purple dots on petals); corolla lobes (5-6); wide spreading, broad, but ending in a point, corolla longer than calyx; perfect, regular, hypogynous and showy.

Generic name said to be after King Lysimachos of ancient Thrace, whose name translates as "ending strife"; somehow this is also derivation of common name.

PYROLACEAE Wintergreen Family

Herbaceous plants of which our only representative herein is non-green.

MONOTROPA UNIFLORA Indian Pipe

W 8-10

Dry upland woods, thickets, usually in deep leaf mulch, especially in oak or maple woodlands.

Commonly waxy-white plant, often growing in clusters; smooth, unbranched to 2 dm. tall; this plant has come to depend upon a fungus which bridges its roots to those of a green plant, transferring carbohydrates from the latter to the Indian Pipe, which, because it has no chlorophyll, is unable to carry on photosynthesis.

Alternate leaves represented by small scales.

Inflorescence: a single, nodding flower.

Flower without sepals; 4-5 distinct petals; 8-10 stamens.

Generic name: Gr., "one turn" refers to twist at top of flowering stem; specific epithet Lat., "one-flowered".

RANUNCULACEAE Crowfoot Family

Herbaceous plants in our area, usually with basal, alternate, often dissected leaves their petioles dilated at the base.

Flowers perfect, hypogynous, often with only 1 whorl of perianth parts, these always separate from each other, as are the numerous stamens and usually many simple pistils.

1 Some or all leaves, or involucral bracts, opposite or in whorls

2 Stems climbing or sprawling . . . **Clematis**

2' Stems not climbing or sprawling

3 Leaves opposite . . . **Clematis**

3' Involucral bracts whorled

4 Lobes of bracts sharply toothed . . . **Anemone**

4' Lobes of bracts rounded . . . **Anemonella**

1' Leaves alternate or basal

5 All leaves basal and grass-like . . . **Myosurus**

5' Leaves not as above

RANUNCULACEAE Crowfoot Family (con't.)

6 Flowers spurred

7 Flowers with 5 spurs . . . **Aquilegia**

7' Flowers with 1 spur . . . **Delphinium**

6' Flowers not spurred

8 Flowers usually yellow, . . . **Ranunculus**

8' Flowers not yellow

9 Leaves lobed, but simple

10 Leaves basal, usually 3-lobed . . . **Hepatica**

10' Leaves 5-11 lobed, 2 leaves near summit of stem . . . **Hydrastis**

9' Leaves compound

11 Petals less than 5 mm. long; flowers crowded on inflorescence

12 Flowers perfect

13 Inflorescence long and narrow; plants 1-2.6 m. tall . . . **Cimicifuga**

13' Inflorescence short, ovate; plants 0.4-0.8 m. tall . . . **Actaea**

12' Flowers unisexual . . . **Thalictrum**

11' Petals conspicuous, 5 mm. or more long; flowers solitary or few

14 Lobes of leaflets sharp-toothed; involucral bracts opposite or whorled . . . **Anemone**

14' Lobes of leaflets rounded; leaves alternate or involucral bracts whorled

15 Stem leaves alternate; plants of low, moist ground . . . **Isopyrum**

15' True leaves all basal; involucral bracts whorled; plants of dry, upland areas . . . **Anemonella**

ACTAEA PACHYPODA White Baneberry or Doll's Eyes

W 4-6

Deep, rich woods, often on north-facing slopes.

Plant to 8 dm. tall.

Leaves 2-3 times ternately compound, the leaflets sharply toothed; petioled.

Inflorescence: short, thick, long-peduncled, terminal raceme, the flowers on stout pedicels.

Flowers: 4-5 petal-like sepals soon deciduous; petals 4-10, small, shorter than numerous stamens with slender, white filaments.

ACTAEA PACHYPODA White Baneberry or Doll's Eyes (con't.)

Specific epithet Lat., "thick pedicelled": both common names refer to the fruit, well described in the 2nd.

ANEMONE

2 spp. in our area share the following:

Stems usually hairy, to 8 dm. tall.

Basal leaves long-petioled, deeply lobed.

Single flowers on long peduncles; flowers with 4-20 petal-like sepals, numerous stamens and pistils.

ANEMONE CANADENSIS White or Meadow Anemone

W 5-7

Low, moist areas, often growing in large colonies.

Sessile, twice 3-parted involucre subtends all peduncles; if more than one peduncle, all but one also bear 2-parted, sessile involucre just below flowers.

Receptacle roundish.

ANEMONE VIRGINIANA Thimbleweed

W-G 4-8

Rocky, open ground; this is the more common species in our area.

3 parts of involucre subtending 1-3 peduncles *all long-stalked.*

Receptacle oblong.

Common name refers to shape of receptacle.

RANUNCULACEAE

ANEMONELLA THALICTROIDES Rue Anemone

W 3-6

Dry, open areas, usually in acid soil.

Slender stemmed plant, to 2 dm. tall; glabrous.

Leaves all basal, compound and petioled; leaflets roundish, stalked; involucral bracts similar to basal leaves, whorled; appear after flowers, each with 3 stalked leaflets.

Inflorescence: an umbel of few flowers, the peduncle dark and wiry.

Flower: 5-10 petal-like sepals; no true petals; stamens numerous, with slender filaments and yellow tips.

Generic name implies that this plant is similar to, but smaller than species of the genus **Anemone**, specific epithet tells us that the leaf resembles that of the meadow rue, **Thalictrum** (which see); common name combines the two.

AQUILEGIA CANADENSIS Columbine

R 4-7

Rocky limestone bluffs and ledges, rich woods.

Slender plant, to 20 dm. tall.

Leaves 2-3 times ternately compound, petioled; basal leaves large, those on stem reduced upwards, and with fewer leaflets, the topmost being trifoliolate or simple.

Flower terminal on branches, large and showy; nodding.

Sepals and petals both 5, and of similar color but each petal has short, spreading lip and is produced backwards into large spur (usually red); stamens numerous, protruding; pistils usually 5, each prolonged into a slender style, also protruding.

Generic name Lat., "to collect water" refers to fluid at base of spur.

Common name alludes to presumed similarity between flowers and a circle of doves (Lat., "columba"): the inverted spurs representing head and shoulders of birds; the petals avian wings.

CIMICIFUGA RACEMOSA Black Cohosh or Snakeroot

W 5-8

Rocky woods, base of bluffs, etc.

Herb to 2.5 m. tall.

Leaves 2-3 times ternately divided, and sometimes even more; leaflets coarsely and sharply toothed; opposite and petioled.

Inflorescence: slender raceme, to 8 dm. long, often branched.

Flowers with 4-5 petaloid sepals; no petals but the very numerous stamens are showy and account for the size and color of the flowers.

Generic name Lat., "to drive away bugs", but we haven't tested its efficacy as an insecticide; specific epithet refers to inflorescence; 2nd common name refers to knotted rhizomes from which the plant grows . . . but why "black" and why "cohosh" author does not know.

CLEMATIS

Species other than **C. fremontii** (see below) in our area are all climbing, sprawling, elongate plants.

Leaves opposite, at least some of them compound; conspicuously petioled.

Flower basically similar to that of **C. fremontii**, but often smaller.

W 3-5

CLEMATIS FREMONTII Leather Flower

Plant of limestone glades; variety **riehlii** of this species is an endemic plant of very narrow distribution, known to grow natively only in a few counties of Missouri, and in west-central Kansas.

Erect plant, to 6 dm. tall.

Leaves opposite, simple, sessile or nearly so; leathery; primary veins parallel.

Inflorescence terminal, solitary, on peduncle shorter than uppermost leaves.

Flowers nodding; corolla absent; sepals (commonly 4) leathery, the margins often rolled; calyx urn-shaped; stamens numerous as are pistils; very showy.

Common name refers to characteristic of the leaves.

RANUNCULACEAE

DELPHINIUM CAROLINIANUM Wild Blue Larkspur

B 5-6

Usually found on limestone glades or prairies, or rocky openings in woods.

Stem soft-hairy, to 12 dm. tall; willowy.

Leaves: lower several deeply 3-5 parted, the parts again divided; upper leaves scattered and less dissected.

Inflorescence: elongate, often branched raceme.

Flower to 3.2 cm. long; 5 petal-like sepals, the upper prolonged into a spur, at base; 4 petals, the upper pair long-spurred (these enclosed in sepal-spur, thus making the flower appear to be 1-spurred); pale blue.

Generic name refers to presumed similarity between the flower shape and a dolphin; common name tells us that the garden larkspur is of this genus.

DELPHINIUM TRICORNE Dwarf Larkspur

B-W 3-6

Rich, moist areas, often in woods

Stem rather succulent, hairy; usually only *3.5 dm. tall.*

Leaves alternate, palmately divided and long petioled; mostly basal; dark green, rough textured.

Inflorescence: few flowered, each of these long pedicelled, thus making the raceme loose.

Flower to 3.5 cm. long; 2 lower sepals split, and with fringed claws; see **D. carolinianum** for other characteristics.

Specific epithet refers to fruits as "3-horned".

HEPATICA NOBILIS Liverwort

W-P-B 3-4

Wooded slopes (usually facing north or east), mossy areas, at the base of ledges.

Several leafless, hairy peduncles, from base; to 15 cm. long.

Leaves all basal, 3 (occasionally more)-lobed, hairy petioled.

Flowers solitary, subtended by 3 entire bracts.

Sepals 6-12, petal-like, free; no petals; many stamens and pistils.

Generic and common names both refer to presumed liverlike shape of leaves.

HYDRASTIS CANADENSIS Golden Seal

W 4-5

Rich, wooded areas.

Hairy stem to 5 dm. tall.

Leaves rounded to cordate at base, palmately 5-7 lobed, the lobes serrate and pointed; petioled; 1 basal leaf, 2 alternate, near top of stem, all growing from about 10 cm. wide at flowering time, to 2.5 dm. wide during summer.

Inflorescence: solitary flower, terminal on stem.

Flower with 3 petal-like sepals, falling as flower opens; no petals; stamens and pistils numerous, the former (white) being all that one actually sees as "the flower".

Common name from flattish areas on the yellow underground parts.

ISOPYRUM BITERNATUM False Rue Anemone

W 3-5

Rich, moist, low, wooded areas, where it is often found growing in large colonies.

Stems slender, to 4 dm. long.

Principal leaves basal, 2-3 times ternately divided, long-petioled; stem leaves alternate, about 1/2 way up stem, and a bract-like whorl just under flowers; these all short-petioled or sessile, and compound.

Few flowers, peduncled, both terminal and from leaf axils.

Flowers with petal-like sepals (usually 5), no petals; stamens many, pistils few.

Specific epithet Lat., "twice ternate" refers to leaves; common name for obvious reasons, when you attempt to differentiate this plant from **Anemonella** (see above); key characters for distinguishing between two are habitat and stem leaves.

MYOSURUS MINIMUM Mousetail

G 3-5

Moist, low, open areas.

Small plant to 15 cm. tall.

Narrow leaves all in basal tuft; grass-like.

Inflorescence long-peduncled, narrow spike, 5-10 mm. long in flower, as much as 6 cm. long in fruit.

Flowers too small to diagnose.

RANUNCULACEAE

MYOSURUS MINIMUM Mousetail (con't.)

Generic and common names both refer to inflorescence; specific epithet Lat., "very small".

RANUNCULUS Buttercup or Crowfoot

Herbaceous plants with alternate stem leaves.

Flowers regular, perfect; petals commonly 5 (each with a nectar gland on upper side of its base); yellow in all species herein discussed; sepals commonly 5, but occasionally more or less; stamens usually numerous, as are pistils.

Common names refer to color and, roughly, to shape of flowers, as well as to presumed resemblance of leaves to the foot of a crow.

1 Petals inconspicuous

2 Plants glabrous

3 Stem leaves petioled; center of flower (the tight group of separate pistils) longish . . . **R. sceleratus**

3' Most stem leaves sessile; center of flower (the tight group of separate pistils) roundish . . . **R. abortivus**

2' At least base of stem and/or petioles hairy . . . **R. micranthus**

1' Petals conspicuous

4 3-parted leaf at point on stem from which flower stalks branch off . . . **R. harveyi**

4' No 3-parted leaf at point on stem from which flower stalks branch off

5 Lateral leaf segments not stalked; erect plants of dry areas, usually in acid soil

6 Leaves pinnately divided, usually longer than broad; plants to 2.5 dm. tall . . . **R. fascicularis**

6' Leaves palmately divided, usually broader than long; plants to 8.5 mm. tall . . . **R. hispidus**

5' Lateral leaf segments stalked; weak-stemmed, sometimes prostrate plants of low, wet areas . . . **R. septentrionalis**

RANUNCULUS ABORTIVUS Small-flowered or Smooth Buttercup

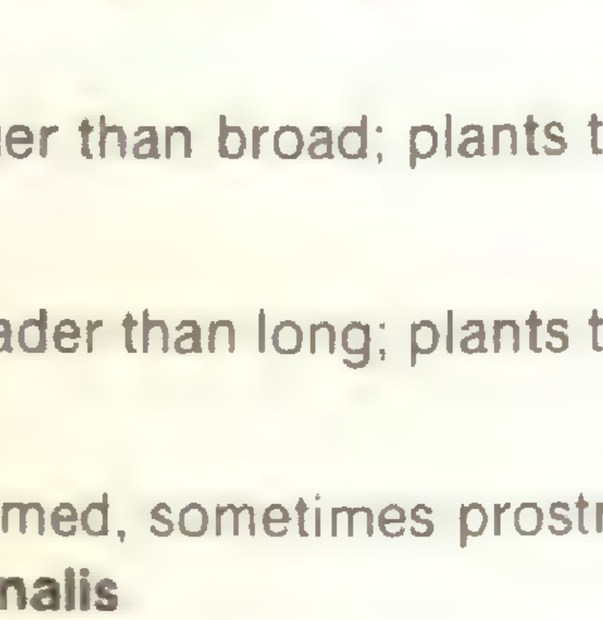
Y 3-6

Moist woodland or open areas.

Stems glabrous or nearly so, branched above; to 5 dm. tall; often several from base of plant.

Basal leaves kidney-shaped, somewhat cordate, petioled; stem leaves sessile or nearly so, usually deeply 3-5 parted.

Flowers with petals 2-3 mm. long, shorter than reflexed sepals.



RANUNCULUS ABORTIVUS **Small-flowered or Smooth Buttercup** (con't.)

Specific epithet Lat., "aborted", refers to very small petals and styles.

RANUNCULUS FASCICULARIS **Early or Prairie Buttercup**

Y 3-5

Dry upland areas, usually open, and in acid soil.

Weak-stemmed plant, silky hairy, to 2.5 dm. tall; often several from base; gray-green.

Leaves mostly basal, distinctly longer than wide, all segments deeply lobed, the terminal stalked; 1-3 stem leaves smaller, sessile or nearly so, less divided; all pinnately divided.

Flowers long peduncled.

Petals pale yellow, to 15 mm. long; waxy.

Specific epithet refers to thickened, clustered roots.

RANUNCULUS HARVEYI

Y 3-5

Acid soil.

Stem usually much branched, to 4 dm. tall.

Basal leaves petioled, broader than long, somewhat cordate at base, rarely 3-lobed; stem leaves sessile and divided into narrow segments (often 3).

Flowers on long peduncles; petals to 8 mm. long, about twice as long as sepals.

Plants of narrow distribution, found growing naturally only in a few counties in Missouri, parts of Alabama, southern Illinois, Arkansas and eastern Oklahoma.

RANUNCULACEAE

RANUNCULUS HISPIDUS Hairy Buttercup

Y 3-6

Usually found in areas of dry, acid soil.

Often several stems from 1 base, sparsely to densely hairy, to 4 dm. tall.

Basal leaves palmately 3-parted, the terminal leaflet stalked; petioles hairy.

Flowers long-peduncled; petals showy, to 15 mm. long.

RANUNCULUS MICRANTHUS

Y 3-5

Varied habitats.

1 to several stems from base, rather slender, hairy, usually branching; to 1.5 dm. tall.

Basal leaves dark green, lustrous, firm; some simple, to 4.5 cm. broad, toothed; lower stem leaves alternate, 3-cleft, short petioled, the upper similar, but sessile (or nearly so) and less divided.

Sepals reflexed; petals narrow, to 3.5 mm. long; pale yellow.

Specific epithet Lat., "small flowered".

RANUNCULUS RECURVATUS Hooked Crowfoot

Y 5-7

Usually in moist areas.

Sparsely hairy stems to 7 dm. tall.

All leaves except the uppermost petioled; broadly 3-cleft, more or less hairy; lowest stem leaves about 1/2 way to top.

Petals about equal the sepals, to 6 mm. long; pale yellow; sepals long-hairy, strongly reflexed.

Specific epithet and common name both refer to the strongly curved style which becomes hook-like in the fruit.

RANUNCULUS SCELERATUS Cursed Crowfoot

Y 4-8

Swampy ditches, moist alluvial soil, etc.

1-3 fleshy, usually glabrous stems from base, usually freely branching and to 6 dm. tall.

Basal and lower leaves succulent, long petioled, deeply 3-parted; upper stem leaves much smaller, commonly with 3 narrow segments.

Many-flowered plant, each on a long peduncle; petals to 3 mm. long, shorter than sepals.

Specific epithet and common name both, according to Gray, refer to habitat of this plant as "a vile place"; but we wonder if plant is not perhaps "cursed" because it is poisonous to cattle and may cause dermatitis in people.

RANUNCULUS SEPTENTRIONALIS Swamp Buttercup

Y 4-6

Low, moist areas.

Stems 1-few from base, often trailing and rooting at nodes (after flowering).

Basal and principal stem leaves all 3-parted, the terminal segment long-stalked, the lateral stalked to nearly sessile; basal and lower stem leaves with brown, leathery stipules.

Petals to 15 mm. long, nearly twice as long as sepals; flowers showy.

Specific epithet describes plant as being "northern".

THALICTRUM REVOLUTUM Waxy Meadow Rue

W 5-7

Prairies and other open areas.

Stout-stemmed plant, to 1 m. tall.

Middle and upper stem leaves sessile or short petioled; all leaves several times ternately compound, the segments mostly entire, their margins slightly rolled; lower surface covered with minute, gland-tipped hairs that give a waxy appearance; alternate.

Flowers mostly unisexual; no petals; sepals petal-like, soon deciduous.

Specific epithet and common name both refer to leaf characters, the latter also to habitat.

RHAMNACEAE

RHAMNACEAE Buckthorn Family

Woody plants with simple leaves, mostly alternate.

Flowers small, regular.

Common name misleading as our species are not spiny.

CEANOTHUS AMERICANUS New Jersey Tea

W 5-11

Prairies, glades and other dry, open areas

Although flowering branches are herbaceous, newly formed each year, this usually free-branched plant is a shrub, to 1 m. tall.

Leaves alternate, petioled, ovate, sharp pointed, serrate, with 3 main veins from base: green and glabrous above, gray hairy below; 1/2 as wide as long.

Inflorescence: axillary peduncles, borne on leafy shoots of the season; lower peduncles longer than upper (to 2 dm.); sometimes with 1-3 bracts at summit; flower cluster (terminal on peduncle) to 4 cm. across; fragrant.

Calyx of 5 in-curved sepals, these and pedicels colored like petals; 5 long protruding petals, shaped like ladles.

Common name refers to fact that leaves were dried and used as an apparently quite adequate tea substitute during the American Revolution.

RHAMNUS CAROLINIANA Carolina Buckthorn or Indian Cherry

Y 5-6

Low, moist woodlands, slopes or on ridges; usually in alkaline soil.

Shrub or small tree to 11 m. tall; young branches hairy, no thorns.

Leaves 3 times longer than broad, *slightly toothed* (visible only with a hand lens); mostly petioled; dark green, shiny; alternate.

Inflorescence from axils of lower leaves of current season; an umbel of hairy-pedicelled flowers, the umbel only sometimes peduncled.

Flowers perfect, 5-*merous*, regular; appearing after leaves.

1st common name misleading: there are no thorns. Despite 2nd common name, if the Indians attempted to eat the lovely fruits (originally green, turning red and then black), they may have been in for an unpleasant surprise, as the fruit of some species is bitter, of others strongly cathartic.

RHAMNUS LANCEOLATA Buckthorn

Y 4-6

Open wooded slopes, thickets, glades, usually in alkaline soil.

Shrub to 2 m. tall.

Leaves oblong, *finely serrate*, minutely hairy below; petioled; alternate.

Flowers of 2 sorts, described by Gleason as staminate and pistillate, by Gray as all perfect; those appearing to be pistillate usually solitary in leaf axils, noticeably pedicelled, the style protruding; those appearing to be staminate 2-3 in axillary clusters, with a short style and short pedicels; both sorts *4-merous*.

Specific epithet refers to leaf-shape; common name again misleading.

ROSACEAE Rose Family

Very difficult family to describe as its members are so variable as to be broken down by many systematists into a number of sub-families; the following generalizations do, however, hold true most of the time:

Leaves alternate, stipulate, and often compound.

Flowers conspicuous, 5-merous, regular, perfect (except in **Aruncus**); petals usually free, overlapping and rounded; sepals usually connate below; stamens 5 to many, separate; gynoecium of 1 compound pistil (as in apples) or many simple, separate pistils (as in raspberries and strawberries). Both stamens and pistil(s) usually protrude beyond perianth, the latter exceeding the former.

1 Woody, often prickly plants

2 Leaves compound

3 Leaves palmately compound (sometimes pinnately so), with 3-5 leaflets; flowers usually white . . . **Rubus**

3' Leaves pinnately compound, with 3-11 leaflets; flowers usually pinkish . . . **Rosa**

2' Leaves simple

4 Stems usually arching or trailing . . . **Rubus**

4' Stems erect

5 Ovary (pistil or pistils) superior

6 1 ovary (pistil) . . . **Prunus**

6' 2-5 ovaries (pistils) . . . **Physocarpus**

5' Ovary inferior

7 Thorns on some or all branches

ROSACEAE Rose Family (con't.)

8 Styles distinct; stamens 5-25 . . . **Crateagus**

8' Styles joined; stamens 15-50 . . . **Pyrus**

7' No thorns on any branches

9 Inflorescence: long, narrow raceme; stamens usually 20 . . . **Amelanchier**

9' Inflorescence usually broader than long; stamens 15-50 . . . **Pyrus**

1' Herbaceous plants

10 All leaves basal, or appearing to be so . . . **Fragaria**

10' Plants with leafy stems

11 Leaves with 3 leaflets (don't count large stipules of **Gillenia**.); petals short and broad

12 Green bracts at base of, or alternating with, lobes of calyx; pistils more than 10

13 Petals white; style long and slender, bent near middle . . . **Geum**

13' Petals yellow; styles short . . . **Potentilla**

12' No green bracts at base of, or alternating with lobes of calyx; petals long, narrow, pointed . . . **Gillenia**

11' Some leaves with 5 or more leaflets

14 Leaves palmately compound

15 Style long, slender, bent near middle . . . **Geum**

15' Style short . . . **Potentilla**

14' At least some leaves pinnately compound

16 Leaves without stipules; flowers imperfect . . . **Aruncus**

16' Leaves stipulate; flowers perfect

17 No green bracts at base of, or alternating with, calyx lobes . . . **Agrimonia**

17' Green bracts at base of, or alternating with, calyx lobes

18 Style short . . . **Potentilla**

18' Style long and bent near middle . . . **Geum**

Y 7-9

AGRIMONIA Agrimony or Cocklebur

3 common species in our area.

Leaves pinnately compound, the larger leaflets interspersed with many smaller ones; leaflets serrate; large leaf-like stipules at base of petiole.

Inflorescence: long, interrupted raceme, its peduncle subtended by toothed bracts.

Flowers yellow, with 5 small petals.

2nd common name refers to burs, formed by hooked bristles of calyx tube, enclosing the fruit.

W 3-4

AMELANCHIER ARBOREA Service Berry or Shadbush

Woods, slopes, etc., one of the 1st plants to bloom in our area.

Understory tree or shrub to 8 m. tall; much branched.

Leaves simple, alternate, serrate, petioled; early leaves and petioles densely hairy (the leaves on under surface); both becoming glabrous at maturity.

Flowers on crowded, nodding racemes to 5 cm. long, each on a silky pedicle to 20 mm. long.

5 sepals recurved; 5 petals longer, narrow, conspicuous; stamens 20, shorter than petals.

Specific epithet Lat., "tree-like"; source of 1st common name a matter of guess-work, of 2nd surer: the plant blooms on the eastern shore at about the time of the shad run

W 5-6

ARUNCUS DIOICUS Goat's Beard

Usually found in wooded areas.

Tall, erect, mostly unbranched, bushy herb to 2 m. tall.

Leaves few, very large (to 5 dm. long), pinnately compound (often twice compound); the leaflets to 15 cm. long, coarsely serrate.

Inflorescence: numerous racemes in large pyramidal panicle; plants dioecious.

Flowers imperfect, regular, 5-merous; sepals and petals smaller in pistillate flowers, these with 15 or more rudimentary stamens and usually 3 pistils; staminate flowers with 15 or more stamens of different lengths, 3-5 rudimentary pistils.

ARUNCUS DIOICUS Goat's Beard (con't.)

Generic and common names refer to same character: the large, white-flowered, triangular, terminal panicle; specific epithet, dioecious.

CRATEAGUS Hawthorn

W 4-6

Small trees or shrubs, branches crooked and usually spiny.

Leaves simple, serrate, alternate, those at end of non-flower-bearing branches usually larger, more deeply cut, and differently shaped from those with flowers.

Inflorescence: corymb, or the flowers solitary or few together.

Flowers perfect, regular, 5-merous; 5-20 stamens; styles 1-5.

Hawthorns are a bane to systematists, as they hybridize all too readily; Steyermark describes 50 species from Missouri, but we won't even make an attempt at differentiating them.

FRAGARIA VIRGINIANA Wild Strawberry

W 4-5

Open areas, often in large colonies.

Low-growing hairy plants.

Leaves basal, with 3 serrate leaflets; long petioled, with stipules at base of petiole.

Inflorescence: leafless peduncle terminated by cluster of as many as 12 pedicelled flowers; usually shorter than leaves.

Flowers imperfect (the staminate and pistillate then on different plants) or perfect; 5-merous, the sepals alternating with green bracts; stamens and pistils both numerous.

Generic name refers to fragrance of fruit; we believe the common name to come from cultural practice of allowing the fruit to form on a bed of straw, in order to preserve it.

GEUM CANADENSE White Avens or Red Root

W 5-10

Open woods and thickets.

Slender stems, to 10 dm. tall.

Basal leaves simple, or with 3-5 (rarely 7) roundish, serrate leaflets, long petioled; lower stem leaves similar, but mostly with 3 leaflets, sessile or short petioled; upper stem leaves simple or 3-cleft, sharply serrate and pointed; basal leaves green all winter.

Flowers few, on velvety pedicels; terminal; *white.*

Petals equal to or longer than sepals, the calyx subtended by bracts; stamens 10 to many; pistils many, each with style bent in middle (the upper part hairy, in this species); the lower half becoming hooked, in fruit.

GEUM VERNUM Early Water Avens

Y 4-6

Low, wet areas.

Stems often several from base, slender, arched, sometimes slightly hairy; to 6 dm. tall.

Basal leaves roundish, heart-shaped at base, 3-5 lobed or some pinnate; the lateral divisions to 2 cm. long, 1.5 wide.

Flowers few in small, terminal cluster; *yellow.*

Sepals (5) triangular, reflexed; 5 petals to 2 mm. long; stamens 10 to many; pistils many, each with style bent at middle, the lower half becoming hooked in fruit; the upper glabrous.

Specific epithet Lat., "of spring".

GILLENIA STIPULATA Indian Physic or American Ipecac

W 5-7

Dry, rocky, upland, open woods, in acid soil

Thinly soft-hairy stems to 10 dm. tall.

Leaves trifoliolate, sessile or nearly so, subtended by large, leaf-like stipules; leaflets lanceolate, to 8 cm. long, sharply serrate, except on 1 or few lower leaves, the leaflets themselves pinnately divided into narrow, serrate lobes.

Few flowers, these mostly terminal on long stalks.

GILLENIA STIPULATA Indian Physic or American Ipecac (con't.)

Flowers regular, perfect, 5-merous; sepals erect, narrow petals spreading; stamens about 20, pistils 5.

Common names justified; the root is definitely emetic.

PHYSOCARPUS OPULIFOLIUS Ninebark

W 5-6

Gravel bars, moist thickets, etc.

Shrub to 3 m. tall, with long branches, twigs marked with lines, below the nodes; bark becomes loose with age, and peels off in long strips.

Leaves simple, roundish, more or less 3-lobed and cordate at base; petioles to 2 cm. long.

Flowers on pedicels to 2 cm. long, crowded on short, roundish raceme; flowers regular, perfect, 5-merous; stamens many, pistils 3-5.

Generic name Gr., "fruit like a pair of bellows", refers to inflated pistils; specific epithet tells us that the leaves are similar to those of a species of **Viburnum**; common name from constant shredding of the bark.

POTENTILLA Cinquefoil

Leaves compound and stipulate.

5-parted calyx has small bracts alternating with its lobes; petals 5, usually roundish; stamens commonly 20; pistils numerous, usually over 10; those herein all with yellow petals.

Generic name Lat., "powerful", applies to belief in medicinal properties of certain species; common name refers to commonly 5-lobed leaves.

1 Flowers solitary on axillary peduncles . . . **P. simplex**

1' Flowers few to several on upper stem

2 Leaves no more than 3-cleft . . . **P. norvegica**

2' Leaves 5 or more cleft . . . **P. recta**

POTENTILLA NORVEGICA

Y 5-10

Open, waste areas.

Stem with stiff (and sometimes also soft) hairs, to 9 dm. tall; commonly branched, leafy, stout and many-flowered.

Lower leaves petioled, trifoliolate, the leaflets serrate, and both leaflets and petiole stiff hairy; upper leaves sessile.

Inflorescence: leafy cyme.

Flowers nearly 1 cm. wide, the petals nearly as long as sepals.

POTENTILLA RECTA* Rough-fruited Cinquefoil

Y 4-8

Dry fields and other open areas.

Very leafy stem, loosely stiff-hairy, to 7 dm. tall.

Leaves palmately compound, the basal and lower with 5-7 leaflets and long petioled; the upper becoming gradually sessile, smaller and 3-lobed; hairy on both surfaces, paler beneath.

Inflorescence: strictly erect cyme, standing above principal leaves; flat.

Flowers on erect pedicels, to 2.5 cm. across; calyx hairy; petals equal to, or longer than, sepals; to 1 cm. long; color actually creamy yellow.

Specific epithet Lat., "upright"; common name obvious.

POTENTILLA SIMPLEX Old Field Cinquefoil

Y 4-6

Rocky or open woods, prairies, old fields, etc.

Coarse plant with stiff-hairy stem, at first erect (to 5 dm. tall), later prolonging to 1.2 m., arching, forking and rooting at tip.

Leaves palmately trifoliolate, or with 5 leaflets, the leaflets over 7 cm. long, usually less than half as wide, toothed on upper 2/3 of margin.

Flowers solitary on axillary peduncles.

Flowers to 15 mm. wide.

Specific epithet Lat., "unbranched".

ROSACEAE

PRUNUS Plum, Cherry or Peach

Tree or shrubs mostly with edible fruits.

Leaves simple, alternate, serrate, often with glands on petioles.

Flowers perfect, regular, 5-merous, with about 20 slender protruding stamens; 1 pistil; petals white; fragrant.

1 Flowers blooming before leaves are fully open

  2 No glands present on calyx lobes . . . **P. americana**

  2' Glands present on margins of calyx lobes . . . **P. munsoniana**

1' Flowers blooming after leaves are at least half-grown . . . **P. serotina**

PRUNUS AMERICANA Wild Plum

W 4-5

Woodlands, fence-rows, stream-banks, pastures and thickets; usually grows in colonies; fleshy red to yellow fruits edible and 2-3 cm. in diameter.

Shrub or tree with dark shaggy-barked trunk; branches often thorny; to 8 m. tall.

Ovate, serrate leaves glabrous above and slightly pubescent below.

Flowers in small 2-5 flowered umbels.

Flowers appear before leaves unfold; 5 white petals to 13 mm. long; solitary pistil with a 7-12 mm. long style; 15 or more stamens; calyx 5-cleft; fragrant.

PRUNUS MUNSONIANA Wild Goose Plum

W 3-5

Borders of streams and woodlands, prairies, moist thickets.

Small tree forming dense thickets; branches glabrous.

Leaves lanceolate and 5-10 cm. long; rounded at base; often folded finely serrate; leaves pubescent underneath, especially along midvein; glands at base of usually red petioles.

Small clusters of flowers on short lateral branches.

Flowers: 5 white petals, 4-7 mm. long; solitary pistil; 15 or more stamens; 5-cleft calyx, with glands on margins.

Common name originated when a seed of this species was found in the craw of a wild goose that had been shot; nurserymen developed a superior plum strain from the single seed.

W 4-5

PRUNUS SEROTINA Black Cherry

Woods, field edges.

Tree with dark bark, its inner layer aromatic; branches reddish-brown; to 25 m. tall, but often blooms before growing so tall.

Leaves shiny, smooth, toothed; dark green above, pale below; thickish, lanceolate, to 12 cm. long.

Inflorescence: terminal raceme, to 15 cm. long, the flowers pedicelled.

Flowers to 10 mm. broad; calyx lobes sharp-pointed; sepals usually longer than wide.

Specific epithet Lat., "late ripening.

P 3-4

PYRUS Wild Crab

Small trees of open areas; often thorny.

Leaves simple, alternate, petioled, serrate; variable in size and toothing.

Inflorescence: umbels or similar clusters on dwarf lateral branches.

Flowers pedicelled, regular, 5-merous, perfect; stamens 15-50, shorter than petals, the anthers red; fragrant.

This genus, as it is interpreted today, is enormous, including apples and pears, besides the crabapples, mountain-ash, and chokeberries. However, of 6 species listed for the state by Steyermark, 2 are escapes from cultivation, another 2 do not grow in our area. Included in above description are only **P. coronaria** and **P. ioensis,** both relatively common in our area.

P 5-6

ROSA CAROLINA Pasture Rose

Mostly dry or rocky open woods, glades, prairies, etc.

Low, slender plant, *thorny* with straight, slender prickles; rarely more than 1 m tall.

Leaves alternate, with 5-7 *leaflets*, glossy and coarsely toothed, stipules flat, to 3 mm. wide.

Flowers usually solitary, to 5.5 cm. broad.

Although Steyermark lists 15 species of rose in the state, it is a relief to learn that this is the only wild, erect, thorny species in our area.

ROSA SETIGERA Prairie or Climbing Rose

W-P 5-7

Moist areas along streams, fence rows, low open woodland, prairie thickets, etc.

Stems without thorns (or with scattered curved prickles), trailing, leaning or climbing; often downward-arching; commonly to almost 2 m. long.

Leaflets 3, or rarely 5, sharply serrate, up to 1 dm. long, lustrous above, glabrous (or hairy on the mid-vein) below; stipules connected to petioles for 1/2 their length.

Inflorescence: corymb of several flowers.

Flowers on glandular-hairy pedicels, to 8 cm. broad; sepals reflexed; styles united in column, about 1/2 as long as stamens.

Specific epithet Lat., "bearing bristles" is essentially a misnomer

RUBUS Bramble

W 4-6

As uninviting as a bramble patch to the hiker, the "**Rubus** complex" stops most plant systematists in their tracks; Gray lists 205 species, Steyermark a mere 16, but we will not attempt to differentiate even among these. Suffice it to say that they include Blackberry, Raspberry and Dewberry, and that they share the following characteristics:

Usually thorny, shrubby plants, the canes often prostrate or arched and often rooting at the tip of the nodes.

Leaves usually palmately compound, with 3-5 leaflets; petioled, these often prickly or thorny.

Flowers regular, 5-merous, the stamens and pistils both numerous; usually white

RUBIACEAE Madder Family

Leaves opposite or whorled, simple, stipulate, entire.

Flowers perfect, epigynous, 4-merous, the petals joined, mostly regular.

Family and common names both refer to genus **(Rubia)** once cultivated for the roots from which the red dye, madder, was obtained.

1 Plants woody . . **Cephalanthus**

1' Plants herbaceous

2 **Leaves in whorls around the stem . . . Galium**

RUBIACEAE Madder Family (con't.)

2' Leaves opposite

3 Leaves connected by many-bristled stipules

4 Flowers 2-6 at node; some part of plant hairy . . . **Diodia**

4' Flowers 10-40 at node; plant glabrous . . . **Spermacoce**

3' Leaves connected by stipules with only 1-2 bristles on each side of stem

5 Plants trailing, leaves evergreen, flowers in pairs . . . **Mitchella**

5' Plants erect, leaves not evergreen, flowers 1 to many . . . **Houstonia**

CEPHALANTHUS OCCIDENTALIS Buttonbush

W 6-8

Low, wet areas.

Shrub to 3 m. tall.

Leaves petioled, essentially glabrous, opposite (or occasionally in whorls of 3).

Inflorescence: densely crowded, globose head, to 3 cm. across, on terminal or axillary, elongate peduncles.

Flowers with family characteristics; styles long and long protruding.

Generic name Gr., "flower head", for inflorescence; specific epithet Lat., "of the west"; common name refers to inflorescence.

DIODIA TERES Rough Button-weed

W 6-10

Dry, rocky, sterile soil, usually growing in colonies.

Stems sometimes prostrate, hairy, to 8 dm. long.

Leaves stiff, sessile, narrow, the stipules very bristly and erect.

Flowers 2-6 at node, sessile in upper axils, with 4 sepals and undivided style.

Generic name Gr., "a thoroughfare", as plants often found growing by the wayside; specific epithet describes stem as round; common name applies to fruit.

RUBIACEAE

W or G 4-9

GALIUM Bedstraw

Slender herbs with 4-angled stems.

Leaves whorled.

Flowers small and grouped in axillary or terminal cymes (in 1 species solitary).

Several species common in our area, but difficult to differentiate.

Generic name Gr., "milk", referring to fact that certain species will curdle milk; common name refers to fact that the springy, dried stems have been used as stuffing in mattresses.

HOUSTONIA Bluets

Small plants with opposite leaves, connected by stipules with few bristles.

Flowers small, the corolla usually much longer than the 4-lobed calyx; stamens 4; ovary topped by slender style with 2 narrow stigmas.

1 Flower solitary; stem delicate, to 15 cm. tall; stamens not protruding from blue corolla . . . **H. minima**

1' Several to many flowers in terminal inflorescence; stem stouter to 60 cm. tall; stamens protruding beyond corolla

2 Stipules with long tips; extra leaves in axils of stem leaves . . . **H. nigricans**

2' Stipules at most only short-pointed; usually no extra leaves in axils of stem leaves . . . **H. longifolia**

W 4-7 & 10

HOUSTONIA LONGIFOLIA

Rocky, open areas, usually in acid soil.

Stems usually numerous from base, simple or branched above, to 25 cm. tall; mostly glabrous but often fine-hairy at nodes.

Leaves sessile, to 30 mm. long, 5 mm. wide, mostly glabrous and essentially 1-veined; stipules rounded or triangular.

Many short-pedicelled flowers in terminal or axillary cymes.

Sepals very narrow, corolla hairy inside, to 9 mm. long, stamens protruding.

Specific epithet Lat., "long leaved".

HOUSTONIA MINIMA Bluets

B 2-4

Prairies, glades, etc., often carpeting grassy open areas; usually in acid soil.

Stem glabrous, much branched, to 15 cm. tall.

Basal leaves to 10 mm. long, short petioled; upper leaves narrower, nearly sessile.

Flowers solitary, terminal and/or axillary, on peduncles to 3 cm. long.

Calyx lobes green, nearly equaling corolla, about 2.5 mm. long; stamens not protruding, center of flower dark.

Specific epithet Lat., "smallest".

HOUSTONIA NIGRICANS

V-W 5-10

Rocky, open areas, ledges and limestone bluffs, etc.

Stems branched above, glabrous or somewhat hairy below, to 6 dm. tall.

Leaves very narrow, sessile, to 30 mm. long, 3 mm. wide, 1 veined, with many small leaves crowded in axils of principal leaves; stipules of upper and middle leaves long-tapering.

Flowers numerous, sessile or short petioled, in crowded panicle.

Sepals narrowly triangular, often hairy-margined; corolla to 7.5 mm. long.

Specific epithet Lat., "blackening", as the plant does in drying.

MITCHELLA REPENS Partridge or Twin Berry

W 5-7

Sandy areas with acid soil.

Small, trailing, evergreen plant, with stem rooting at the nodes and often forming mats; to 30 cm. long.

Evergreen leaves opposite, petioled, round to ovate; to 2 cm. long; shining; often with white lines.

Flowers terminal or axillary (mostly the former), paired on a single peduncle, their basal parts growing together.

MITCHELLA REPENS Partridge or Twin Berry (con't.)

Flowers usually 4-merous throughout, but 2 different types produced; one with protruding stamens and short styles, the other with short stamens and protruding styles; both sorts with long corolla tube, fuzzy inside; fragrant.

Specific epithet Lat., "creeping"; 2nd common name refers to the fruits formed by "Siamese twinned" flowers.

SPERMACOCE GLABRA Smooth Buttonweed

W 6-10

Low, wet areas.

Glabrous (or usually so) simple or branched, the stem often prostrate at base, to 6 dm. long.

Leaves opposite, narrow, their bases (or petioles) joined by stipules with several bristles.

Inflorescence: many flowers clustered in sessile, axillary whorls.

Corolla barely exceeds calyx, the former to 3 mm. long, very hairy inside.

Generic name Gr., "pointed seed," probably from calyx lobes adhering to fruit; specific epithet Lat., "smooth"; common name obvious.

RUTACEAE Rue Family

Woody plants (as herein described), containing pungent, acrid oils; leaves usually marked with translucent dots.

Flowers hypogynous, usually regular, 4- or 5-merous; the pistils usually united in some way.

Common name refers to irritating properties of plant for which family is named, i.e., one would "rue" having contact with it; but it also includes our citrus fruits. Aromatic plants.

PTELEA TRIFOLIATA Hop Tree or Wafer Ash

G 4-6

Open areas or thickets, etc.; usually on alkaline soil.

Shrub or small tree, the branches glabrous or nearly so.

Leaves alternate, glossy, *trifoliolate*, long petioled, the leaflets sessile.

Small flowers in compound, terminal cyme.

Flowers perfect and imperfect on same plant; regular, 4-5-merous; ill-smelling, as they are pollinated by carrion-loving flies.

PTELEA TRIFOLIATA Hop Tree or Water Ash (con't.)

Generic name, Gr., "elm", refers to similarity of fruits to those of **Ulmus**, our elm; 1st common name refers to use of fruit as a substitute for hops, 2nd to form of fruits.

ZANTHOXYLUM AMERICANUM Prickly Ash

Y-G 4-5

Woods, bluffs, forming thickets, usually in alkaline soil.

Shrub or tree to 8 m. tall; twigs and petioles prickly; aromatic.

Leaves alternate, *pinnately compound, leaflets 5-11,* downy when young.

Tiny flowers in axillary, short peduncled clusters, on branches of previous year; blooming before tree leafs out.

No calyx; petals 4-5, fringed at tip; dioecious.

Generic name Gr., "yellow wood"; common name refers to similarity of compound leaves to those of ash, although in latter these are always opposite.

SANTALACEAE Sandalwood Family

Our only Missouri representative of this essentially southern and tropical family is herbaceous and, like most of its relatives, a parasitic plant.

COMANDRA RICHARDSIANA Bastard Toadflax

W 4-7

Dry, rocky, usually upland areas, most frequently in acid soil.

Herbaecous plant, the stems often several from base, leafy, to 3 dm. tall.

Leaves alternate, entire, green on both sides, sessile or nearly so

Compound inflorescence to 4 cm. broad, usually flat-topped.

Flowers tiny, sepals to 3 mm long, petaloid (no true corolla)

Generic name Gr., "hair" and "man", referring to hairs on anthers, common name refers to plant as similar to, but not a true (hence "bastard") toadflax, the common name of a genus in the Scrophulariaceae, **Linaria**, (which see).

SAPOTACEAE Sapodilla Family

A small, mostly tropical family of woody plants; only one genus in North America; chicle, gutta-percha and balata all from this family, most members of which yield latex in some form, as does **Bumelia**.

BUMELIA LANUGINOSA Chittim-wood, False or Southern Buckthorn, or Gumelastic

W 4-7

Dry, open woodlands, bluffs, etc.; rarely in valleys or low areas.

Small, thorny tree with woolly twigs; to 18 m. tall.

Leaves alternate on young shoots, clustered on short lateral branches; rusty-woolly on lower surface; short petioled.

Umbels of small flowers in leaf axils, 5-40 in cluster, on pedicels to 12 mm. long; fragrant.

Specific epithet, "woolly"; 1st common name thought to be derived from some Indian language; 2nd from presumed similarity to **Rhamnus** (which see); 3rd from material obtained from bark and usable as chewing gum.

SAURURACEAE Lizard's-tail Family

Succulent herbs with jointed stems.

Leaves alternate and entire.

Flowers small, with neither calyx nor corolla.

SAURURUS CERNUUS Lizard's-tail

W 5-9

Swampy woods and other wet areas; spicy fragrance when crushed; often in large colonies.

Stem branched, jointed, to 12 dm. tall.

Leaves alternate, entire, cordate at base, petioled.

Inflorescence: 1 or 2 peduncled, terminal spikes, to 15 cm. long, but often surpassed by foliage; nodding at the tip.

Flowers with neither calyx nor corolla; long white filaments protrude beyond pistils.

Generic name Gr., "lizard's-tail", refers to inflorescence as does common name; specific epithet Lat., "nodding", refers to its tip.

SAXIFRAGACEAE Saxifrage Family

Leaves of herbaceous plants usually basal, often forming rosette; exstipulate.

Flowers: regular, usually perfect 5-merous; pistil often 2-parted; stamens usually 5-10.

Family name (and genus **Saxifraga**) may derive from early belief that some genera could dissolve kidney stones; or from common familial habitat in rocky areas where plants seem actually to "break stones" (Lat.) by growing through cracks.

1 Herbaceous plants

2 Stem with 6 or more well developed leaves . . . **Penthorum**

2' Leaves either all basal or with 1-2 well developed stem leaves

3 Most leaves basal, one opposite pair on stem . . . **Mitella**

3' Leaves all basal, or only a single leaf on stem; stems with more than 1 flower

4 Leaves longer than broad, mostly entire; stamens 10 . . . **Saxifraga**

4' Leaves at least as broad as long, lobed or toothed; stamens 5 . . . **Heuchera**

1' Woody plants

5 Leaves deeply lobed or cut, unequally toothed, about as broad as long, alternate . . . **Ribes**

5' Leaves regularly and shallowly toothed; usually longer than broad, opposite . . . **Hydrangea**

HEUCHERA AMERICANA Alum Root

G 4-6

Rocky woodland, ledges, etc.

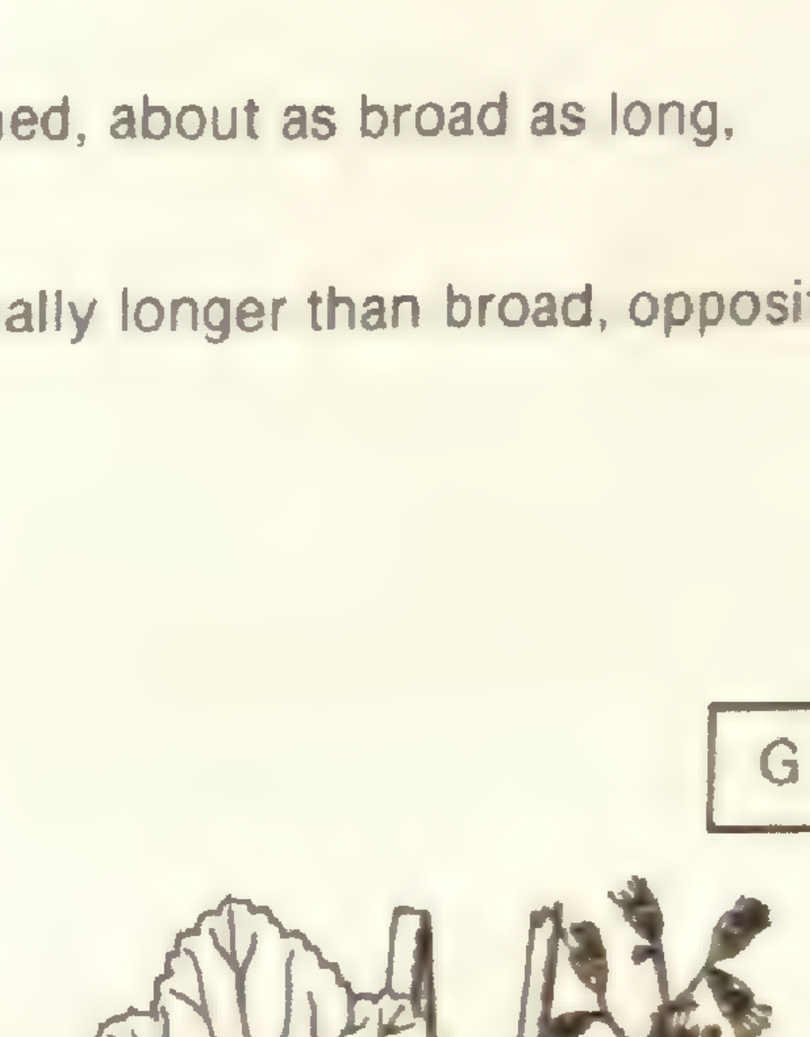
Stout-stemmed plant to 1 m. tall.

Leaves usually all basal, long petioled, palmately lobed (similar to **Geranium** leaves).

Inflorescence: long, terminal, raceme-like, with drooping flowers.

Calyx bell-shaped, nearly regular, covered with gland-tipped hairs; petals barely show, but style and orange anthers protrude.

Common name from astringent qualities that have made plant useful in medicine.



SAXIFRAGACEAE

HEUCHERA RICHARDSONII

G 4-7

Open areas, especially on slopes and upland.

Other than different habitat preference, this species differs from **H. americana** *chiefly in having quite irregular flowers, and in being more generally hairy,* but the two intergrade confusingly.

HYDRANGEA ARBORESCENS Wild Hydrangea or Seven Bark

W 5-7

Rich or rocky woods, low areas; in moist soil.

Straggling shrub to 3 m. tall.

Leaves opposite, simple, serrate, ovate, whitish below, petioled.

Inflorescence crowded, terminal, more or less flattened or convex, to 10 cm. wide; central flowers fertile, outer flowers often sterile and with enlarged sepals.

Fertile flowers with minute calyx, 4-5 short petals, 8-10 protruding stamens, 1 pistil and 2 styles; regular, epigynous; sterile flowers actually more showy, as they consist only of a large white calyx.

Specific epithet Lat., "becoming tree-like"; 2nd common name refers to shredding of bark when plant becomes old.

MITELLA DIPHYLLA Miterwort or Bishop's Cap

W 4-6

North facing wooded slopes, ledges, mossy areas, etc.

Flowering stem with pair of sessile (or nearly so) leaves midway up; to 4.5 dm. tall.

Basal leaves long-petioled, shallowly 3-5 lobed, soft-hairy and cordate.

Inflorescence: terminal raceme of small flowers, the raceme to 15 cm. long, each flower on pedicel to 2 mm. long.

MITELLA DIPHYLLA Miterwort or Bishop's Cap (con't.)

Flowers to 6 mm. wide, perfect, regular, 5-merous, the narrow petals deeply pinnately fringed giving appearance of snow-flakes.

Generic name Lat., "small cap"; this and 2 common names all refer to shape of fruit; specific epithet Lat., "2-leaved" refers to stem leaves.

PENTHORUM SEDOIDES Ditch Stonecrop

Y-G 7-10

Wet soils bordering ditches, streams, etc.; often actually growing in water.

Stem prostrate at base, simple or bushy-branched: to 1 m. tall.

Leaves scattered, finely toothed, pointed at both ends.

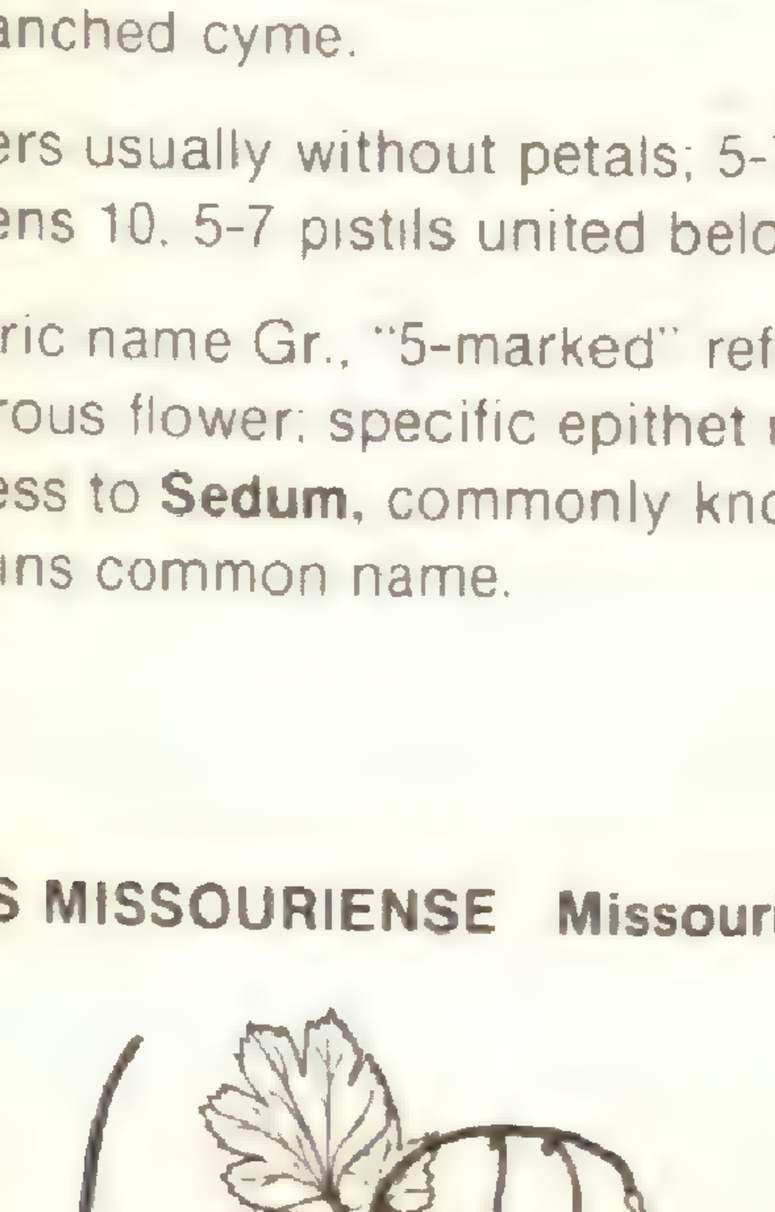
Flowers in loose spikes on upper side of branched cyme.

Flowers usually without petals; 5-7 calyx lobes, stamens 10, 5-7 pistils united below.

Generic name Gr., "5-marked" refers to 5-merous flower; specific epithet refers to likeness to **Sedum**, commonly known as "stonecrop"; this plus reference to habitat explains common name.

RIBES MISSOURIENSE Missouri Gooseberry

W 3-5



Dry open woods or disturbed areas.

Low shrub with stout, red (to dark colored), long (to 17 mm.) spines at nodes

Leaves alternate, palmately lobed, long petioled; leafing out much earlier than other native shrubs.

Small flowers in small clusters the flowers pedicelled, on peduncles usually longer (to 2 cm.)

Flowers regular, epigynous, perfect, 5-merous, to 13 mm. long, the stamens long protruding (3 times as long as petals).

Generic name, Arabic, "acid tasting".

SAXIFRAGACEAE - SCROPHULARIACEAE

G 4-6

SAXIFRAGA PENSYLVANICA Swamp Saxifrage

Usually found on moist, north-facing, sandstone bluffs.

Flowering stem erect, lined soft-hairy above; leafless below inflorescence, *to 9 dm. tall.*

Leaves basal, leathery, *to 30 cm. long,* narrowed to margined petiole, to 5 cm. long.

Inflorescence usually branched; at first a dense, narrow, compact panicle, eventually elongating and opening out.

Flowers 5-merous, the calyx lobes reflexed, the petals to 3 mm. long; regular.

Generic name: see explanation under family description.

W 4-6

SAXIFRAGA VIRGINIENSIS Early Saxifrage

Small plants of moist, usually acid soil.

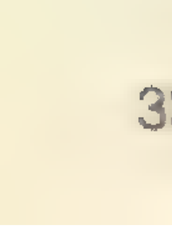
Flowering stems usually solitary; leafless below inflorescence (there may be bracts present at base of inflorescence branches); usually glandular-hairy; flowering at 1 dm. tall, but subsequently growing to *3.5 dm. tall.*

Leaves in basal rosette to *8 cm. long,* with wavy and/or toothed margins; hairy, gray-green (often purplish on underside); broad petioles with margined hairs.

Inflorescence: small white flowers, in open panicle

Flowers 5-merous; sepals spreading, petals to 6 mm. long; 2 styles, 10 yellow stamens.

Generic name: see explanation under family description



SCROPHULARIACEAE Figwort Family

Herbaceous plants.

Flowers hypogynous, usually 5-merous, irregular; perfect; stamens usually 4 or 2.

1 At least some leaves alternate

2 Stem glabrous, or essentially so

3 Anther-bearing stamens 5; corolla nearly regular . . . **Verbascum**

3' Anther-bearing stamens 4; corolla irregular . . . **Linaria**

2' Stems more or less hairy

SCROPHULARIACEAE Figwort Family (con't.)

4 Flowers solitary, axillary, corolla spurred . . . **Kickxia**

4' Flowers several to many in terminal inflorescence; corolla not spurred

5 Anther bearing stamens 5; corolla nearly regular . . . **Verbascum**

5' Anther bearing stamens 4; corolla irregular

6 Main leaf lobes rounded, serrate . . . **Pedicularis**

6' Main leaf lobes sharp pointed, entire . . . **Castilleja**

1' All leaves opposite or whorled

7 Leaves chiefly whorled . . . **Veronicastrum**

7' Leaves chiefly opposite

8 Some leaves deeply divided

9 Plant 1-2 dm. tall; corolla violet . . . **Conobea**

9' Plant 3-20 dm. tall; corolla yellow

10 Corolla less than 20 mm. long . . . **Seymaria**

10' Corolla 30-50 mm. long . . . **Gerardia**

8' Leaves entire or merely toothed (if divided, only 1/2 distance to midvein)

11 Calyx and corolla 4-lobed . . . **Veronica**

11' Calyx and corolla 5-lobed

12 Flowers solitary, or 1-2 in leaf axil

13 Calyx deeply parted

14 Pedicel with 2 bracts just below calyx . . . **Gratiola**

14' Pedicel without bracts . . . **Lindernia**

13' Base of calyx tubular, not divided

15 Corolla definitely 2-lipped . . . **Mimulus**

15' Corolla not 2-lipped . . . **Gerardia**

12' Flowers 2-many in terminal or axillary inflorescence

16 Some or all leaves deeply lobed

17 Flowers in crowded spike . . . **Pedicularis**

17' Inflorescence loose, not crowded . . . **Gerardia**

16' Leaves not deeply lobed

18 Leaf petioles 15-60 mm. long; plants 2-3 m. tall . . . **Scrophularia**

18' Leaves sessile, or with petioles less than 25 mm. long; plants 5 cm.-1.5 m. tall

SCROPHULARIACEAE

SCROPHULARIACEAE Figwort Family (con't.)

19 Principal leaves 1-8 mm. wide . . . **Gerardia**

19' Principal leaves 5-60 mm. wide

20 Upper and lower parts of corolla differently colored . . . **Collinsia**

20' Corolla essentially of one color . . . **Penstemon**

CASTILLEJA COCCINEA Indian Paint Brush

R 3-7

Prairies, rocky open glades, swampy meadows, etc.

Hairy stem, usually simple from basal rosette of mostly entire leaves; to 6 dm. tall.

Stem leaves alternate, usually with 3-5 segments, but very variable.

Spike at first dense, and only to 6 cm. long, but later elongating to 2 dm.

Flowers are small, typical of family, but inconspicuous; part that makes plant showy is brightly colored bracts in axils of which flowers develop.

Specific epithet and common name both refer to colorful bracts.

COLLINSIA VERNA Blue-eyed Mary

B & W 4-6

Moist, rich woodlands, in which plant sometimes covers acres, in dense stands.

Weak, slender stem, often branching from base; striate; to 6 dm tall.

Leaves opposite, ovate; the upper narrower and partly clasping by cordate base; the lower slender-petioled.

Inflorescence: umbel-like cluster, appearing to be whorled in axils of upper leaves, each whorl about 6-flowered, the flowers long pedicelled.

Corolla 2-lipped, the upper usually white, the lower bright blue.

Specific epithet Lat., "spring", refers to early blooming time.

V 5-10

CONOBEA MULTIFIDA

Wet, open areas of all sorts.

Diffusely spreading, much branched, minutely hairy stem, to 2 dm. tall.

Leaves opposite, irregularly pinnate, petioled, to 3 cm. long.

Flowers solitary on axillary pedicels.

Corolla 2-lipped, scarcely longer than the calyx (about 4 mm.).

Specific epithet Lat., "much cleft", refers to leaves.

GERARDIA

Stems erect, slender, usually branched, sometimes angled, glabrous.

Leaves narrow, generally opposite, but often alternate on branches.

Inflorescence: racemes from axils of reduced upper leaves or terminal.

Flowers with regular, tubular calyx; corolla irregular, the lower lobes spreading, the upper 2 usually arched or recurved; stamens 4, in 2 pairs, the lower pair longer.

1 Corolla yellow

  2 Stem glabrous . . . **G. flava**

  2' Stem hairy

    3 Most or all leaves much dissected . . . **G. pedicularia**

    3' Leaves at most cut into coarse, pinnate lobes . . . **G. grandiflora**

1' Corolla not yellow

  4 Calyx tube only slightly veined; stems deep green to purple tinged; plant of moist areas . . . **G. tenuifolia**

  4' Calyx tube with noticeable network of veins; stems yellowish or pale green; plants of dry, poor, usually acid soil . . . **G. gattingeri**

Y 6-9

GERARDIA FLAVA

Wooded areas.

Stem glabrous and glaucous, often purplish, to 2.5 m. tall.

Lower leaves deeply cut, the upper less so.

Inflorescence: open, terminal raceme.

Corolla to 6 cm. long, hairy within.

GERARDIA FLAVA (con't.)

Specific epithet Lat., "yellow".

One variety of this species (**calycosa**; see Steyermark for its differences from var. **flava**) endemic to a few counties in Missouri and Arkansas.

GERARDIA GATTINGERI

P 8-10

Dry, poor, usually acid soils of open woodlands or upland ridges, etc.

Pale or yellowish-green plant, the stem smooth, with spreading branches very slender, and bearing only a few small leaves.

Leaves very narrow (to 1.3 mm. broad), pointed.

Flowers often solitary at tips of side branches, as well as few on main stem and in poorly developed terminal raceme.

Calyx tube with noticeable network of veins, to 3.5 mm. long, its lobes broadly triangular; corolla tube to 1.8 cm. long.

GERARDIA GRANDIFLORA

Y 7-9

Dry, rocky, open areas in oak-hickory forest, often on upper slopes, in acid soil.

Stem densely hairy, with spreading branches, to 1.5 m. tall.

Leaves petioled (petioles to 6 mm. long), the lower more cut than upper, the lobes pinnate.

1-few flowers terminal, or in upper leaf axils of branches.

Calyx lobes lanceolate and toothed; corolla 4.5 cm. long.

Specific epithet Lat., "large-flowered".

Y 8-9

GERARDIA PEDICULARIA Fern-leafed Gerardia

Dry or open woodland borders, in acid soil.

Much-branched stem, gland-hairy below, soft-hairy above, to 1.2 m. tall.

Leaves thin, short petioled to almost sessile, much dissected, finely hairy.

Flowers solitary on slender, hairy, axillary pedicels to 2.5 cm. long.

Calyx gland-hairy, its lobes nearly 1 cm. long; corolla yellow, but commonly purple tinged, to 4 cm. long.

Source of common name obvious.

P-B 8-10

GERARDIA TENUIFOLIA

Open woodlands, prairies, wet depressions, etc.

Stem smooth, slender, much-branched, to 7 dm. tall.

Leaves to only 6 mm. wide.

Flowers solitary on slender pedicels from axils of upper leaves.

Corolla spotted and glabrous inside, to 1.5 cm. long, its upper lip arching over the stamens.

Specific epithet Lat., "slender-leaved".

W 4-10

GRATIOLA Hedge Hyssop

Species in our area share the following characteristics:

Small plants (to 4 dm. tall) of wet, often muddy, areas

Leaves opposite

Flowers solitary on axillary pedicels; a pair of bracts just below the calyx.

Flowers 5-merous, somewhat irregular, the sepals distinct; corolla tubular and often purple-lined within; 2 stamens.

Generic name Lat. "grace" or "favor" refers to supposed medicinal properties; common name refers to presumed similarity to **Hyssopus**, of the mint family; for "hedge" we cannot account.

SCROPHULARIACEAE

KICKXIA ELATINE Cancer Root

V-Y 5-10

Hairy, widely spreading, prostrate stems to 5 dm. long.

Leaves mostly alternate (opposite below), short-petioled to sessile, broadly ovate, to 3 cm. long, hairy.

Flowers mostly solitary on long pedicels from leaf axils, the pedicels thread-like, and down-bending

Flowers tiny, the upper lip violet, the lower yellow.

Common name for early belief that some property of the plant was a cure for cancer.

LINARIA CANADENSIS Toadflax

B 4-9

Sandy or rocky, open areas.

Stem very slender, with widely scattered leaves; glabrous; forms trailing offshoots bearing leaf rosettes that remain green all winter; to 8 dm. tall.

Leaves alternate (except opposite or whorled below), narrow (to 7 mm. wide), entire.

Inflorescence: terminal raceme, the flowers on pedicels to 4 mm. long.

Corolla *blue*, spurred and 2-lipped, the lower with 2 white ridges; 4 stamens.

Generic name Lat., "flax", refers to similarity in leaves (see **Linum**); common name reflects a common practice of using the word "toad" to describe something as worthless; despite likeness of foliage, this does not produce useful fibers.

LINARIA VULGARIS* Butter and Eggs

Y & O 5-11

Waste, open areas.

Stem very leafy; to 8 dm. tall.

Leaves alternate, narrow, entire.

Inflorescence: numerous flowers, in compound, terminal spike.

Flowers *yellow* and *orange*, spurred, 2-lipped, with 4 stamens.

Generic name: see **L. canadensis**; common name for 2 colors of flower.

W-V 6-10

LINDERNIA ANALGALLIDEA False Pimpernel

Wet muddy or sandy areas.

Diffusely branched, slender, smooth plant to 2 dm. tall.

Leaves opposite, entire and sessile (or nearly both); to 2 cm long.

Flowers solitary, on axillary, bractless pedicels, these at least twice as long as subtending leaves.

Corolla to 8 mm. long.

Specific epithet and common name both refer to similarity of plant to **Anagallis,** the "pimpernel" (which see).

V 6-9

MIMULUS ALATUS Monkey Flower

Swampy or otherwise wet areas.

Glabrous plant with slightly winged stem, to 1 m. tall.

Leaves petioled, sharply and coarsely toothed.

Flowers short-pedicelled in axils of upper leaves, the *pedicels to 1.5 cm. long.*

Corolla to 2.5 cm. long; 4 stamens, in 2 unequal pairs.

Generic name diminutive of Lat. word for buffoon, referring, as does common name, to presumed similarity between 2-lipped corolla and a grinning monkey's face: specific epithet Lat., "winged" refers to stem.

B 6-9

MIMULUS RINGENS Monkey Flower

Wet soil along streams, ponds, ditches, etc.

Stem glabrous, simple or branched above, 4-angled, to 1 m. tall.

Leaves sessile.

Flowers solitary in upper leaf axils, on *pedicels to 4 cm. long.*

Corolla to 4 cm. long.

Generic and common names: see **M. alatus;** specific epithet Lat., "gaping", refers again to the similarity to a grinning face.

(This species not nearly as common in our area as is **M. alatus**).

SCROPHULARIACEAE

PEDICULARIS CANADENSIS Lousewort or Wood Betony

Y-P 4-5

Variety of habitats, but usually in leached or sterile soil, often growing in dense clumps.

Hairy plant with closely clustered stems, to 4 dm. tall.

Leaves *mostly alternate,* the lowest pinnately cleft, the others somewhat so; *almost all petioled;* downy, with silvery sheen; somewhat fernlike.

Flowers in dense terminal clusters on unbranched stalk.

Upper lip of corolla arches over lower; *2 slender projections at its tip;* calyx with long silky hairs.

Generic and first common name both refer to lice, from early belief that cattle grazing on plant became covered with same; second eludes us.

PEDICULARIS LANCEOLATA Swamp Wood Betony

Y 8-10

Swampy or other wet areas, in alkaline soil.

Stems erect, *glabrous or nearly so,* to 8 dm. tall.

Leaves mostly *opposite and sessile;* pinnately lobed, but not deeply so, each lobe with rounded teeth.

Inflorescence: spikes terminal and from upper leaf axils.

Upper lip of corolla *without projections at tip.*

Generic name: see **P. canadensis;** specific epithet refers to general shape of leaves, part of common name to usual habitat, but the remainder remains a mystery to us.

PENSTEMON DIGITALIS Foxglove Beard Tongue

W 5-7

Rich or low areas of woodland, woodland borders, prairies, etc.

At least lower half of stem glabrous; lustrous; slender lines of hair running down from leaf bases; often purplish and slightly glaucous; sturdy *to 1.5 m. tall.*

Rosette of petioled leaves at base; stem *leaves glabrous beneath,* erect up to 15 cm. long; entire to slightly toothed; sessile (sometimes slightly clasping) and reduced upwards.

Inflorescence: terminal, branched panicle, to 3 dm. long.

PENSTEMON DIGITALIS Foxglove Beard Tongue (con't.)

Corolla often suffused with violet, usually with purple lines inside, to *30 mm. long.*

Generic name Gr., "5 stamens" refers to 5th stamen of this genus: conspicuous, but sterile; specific epithet refers to similarity between this species and the foxglove, **Digitalis,** of same family.

PENSTEMON PALLIDUS Pale Beard Tongue

W 4-7

Dry open areas, usually in acid soil.

Very hairy plant, with stem *to 9 dm. tall* (the smallest of our **Penstemons**).

Leaves firm, pale, *soft-hairy on both sides;* reduced and few upwards remotely toothed, partly clasping.

Inflorescence narrow, branched, terminal.

Flower with corolla *to 22 mm. long,* marked inside with fine, purple lines.

Generic name: see **P. digitalis**; specific epithet Lat., "pale", refers to leaves; common name to fuzzy, sterile 5th stamen.

SCROPHULARIA MARILANDICA Figwort or Carpenter's Square

R-Br 7-10

Rich woodlands, woodland borders and often in low areas.

Stems erect, glabrous below, 4-angled and grooved.

Leaves opposite, long-petioled (the principal leaves only 2-3 times longer than these); serrate, pointed, rounded to slightly cordate at base.

Inflorescence terminal, large (often to 15 cm in diameter); a roughly pyramidal, loose panicle.

Flowers small (corolla to 8 mm. long); 5th, sterile stamen, longer than wide; dark purple or brown.

Generic and 1st common name both stem from belief that fleshy knobs on underground parts were fig-like, and would, therefore, cure scrofula and remove fig-shaped warts.

SCROPHULARIACEAE

SEYMARIA MACROPHYLLA Mullein Foxglove

Y 6-9

Rich, low woods, thickets, etc.

Stems branched, sparsely hairy, to 1.5 m. tall.

Leaves large, the lowest deeply, pinnately cut, the upper progressively reduced and becoming lanceolate and entire.

Inflorescence: sessile (or nearly so) flowers in long, leafy, interrupted spikes from axils of upper leaves.

Flowers with short-tubed corolla, woolly inside, and in-curved; less than 20 mm. long; 4 stamens of nearly equal length, protruding.

Specific epithet Lat., "large-leaved"; common names refer to presumed similarities to **Verbascum** (which see) and **Digitalis** (also a member of the Scrophulariaceae, but not found as a wild plant in our area).

VERBASCUM BLATTARIA Moth Mullein

W or Y 5-9

Open areas of various sorts.

Slender plant, the stem green and smooth below, gland-hairy above, to 1 m. tall.

Basal leaves large, tapering to base, toothed; upper leaves smaller, alternate, *somewhat clasping or merely sessile.*

Inflorescence: *loose, elongate raceme* with a single flower at each node, the pedicels 8-15 mm. long.

Flowers to 2.5 cm. wide; 5-merous, almost regular; 5 *stamens with woolly, violet colored filaments.*

Specific epithet refers to a moth, as does common name, both indicating presumed likeness of these lovely flowers to that insect; "mullein" said to be from Lat. **mollis,** "soft," referring to hairiness of some species (see below)

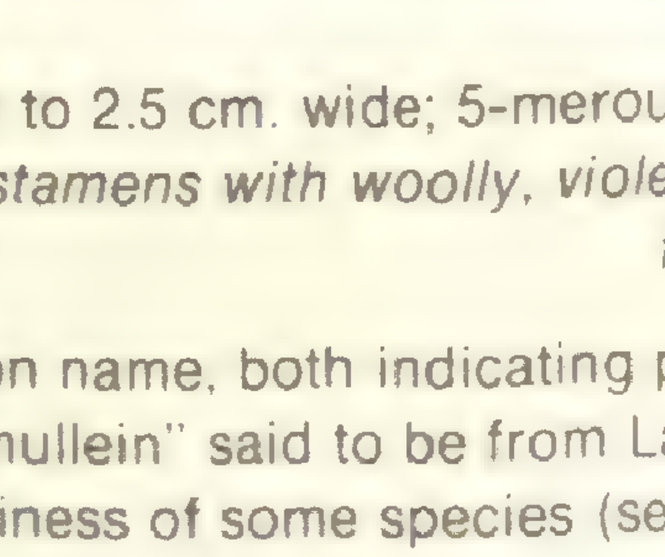
VERBASCUM THAPSUS* Mullein or Flannel Plant

Y 5-10

Dry, waste, open areas.

Weedy, coarse plant growing from basal rosette of large, hairy leaves; stem erect, unbranched, densely woolly, *winged by leaf bases that grow downwards on it;* to 2 m. tall.

Lower leaves to 3 dm. long, petioled; upper progressively reduced, sessile, and their bases continuing down stem; all very hairy.



VERBASCUM THAPSUS* Mullein or Flannel Plant (con't.)

Inflorescence: *thick (to 3 cm.), spike,* usually solitary and to 5 dm. long.

Flowers with corolla to 22 mm. wide; filaments of upper *3 stamens short, densely white-hairy; lower 2 much longer and glabrous,* or nearly so.

1st common name, see **V. blattaria**; 2nd for obvious reasons.

VERONICA Speedwell

W or B 4-8

Several species of this small plant in our area, some forming mats as weeds in lawns, etc.; others characteristic of areas with cold spring water; Steyermark lists 4 native, 4 introduced species in Missouri.

Foliage leaves usually opposite or whorled, on stems to 4 dm. tall.

Blue or white flowers in terminal or axillary racemes; 4-merous, regular or nearly so; 2 stamens, protruding; 4-5 mm. wide.

VERONICASTRUM VIRGINICUM Culver's Root

W or P 6-9

Open woods, thickets, prairies, swampy meadows, etc.

Erect plants, sometimes branched, smooth or minutely hairy; to 20 dm. tall.

Leaves with petioles to 10 mm. long, in whorls of 3-6; serrate.

Inflorescence: 1 or more slender, terminal spikes, crowded; to 15 cm. long.

Flowers mostly 5-merous, nearly regular, the corolla with a long tube; stamens 2, long-protruding.

Generic name means "false **Veronica**"; common name refers to a doctor who popularized use of root as a cathartic.

SOLANACEAE Nightshade Family

Herbaceous plants in our area, with leaves generally opposite, and often ill-smelling.

Flowers perfect, hypogynous, usually regular, the calyx and corolla both tubular and usually 5-lobed; the corolla often pleated; stamens usually 5, exceeded by single style.

Common name of family derives from soporific properties of many of its members.

1 Corolla tube much longer than the spreading lobes . . . **Datura**

1' Corolla tube much shorter than the spreading lobes

2 Anthers protruding conspicuously from corolla . . . **Solanum**

2' Anthers included within corolla tube, or just at its opening . . . **Physalis**

DATURA STRAMONIUM Jimson Weed or Thorn Apple

W-P 5-10

Pastures, roadsides, waste areas; this species is native in tropical America and has apparently recently spread to Missouri.

Stout, herbaceous plant with branched, glabrous, green or purple stem; to 1.5 cm. tall.

Leaves thin, to 20 cm. long, pointed, with a few sharp teeth, long-petioled.

Large showy flowers single and on peduncles, in forks of branching stem.

Corolla tube trumpet shaped, to 10 cm. long, appearing to be somewhat pleated; the tubular calyx about half as long; flowers open at sunset and emit an exotic sort of perfume.

Generic name and specific epithet of questioned origin; 1st common name a contraction of "Jamestown Weed", that early settlement said to be the place where the English colonists first encountered this highly poisonous, narcotic plant; 2nd common name from the spiny fruit.

PHYSALIS Ground Cherry

Y 5-9

Several species in our area, mostly found in open woods, meadows, etc,; Steyermark lists 22 native, 5 introduced species in Missouri.

Herbaceous plants, usually much-branched, the leaves mostly alternate.

Inflorescence: flowers solitary or few, on peduncles from leaf axils.

PHYSALIS Ground Cherry (con't.)

Flowers with 5-lobed, tubular calyx which enlarges greatly as fruit forms, and then covering the fruit entirely, or almost so; corolla tubular, with either no lobes, or these very shallow; marked with 5 concave spots at base (making center of the flower dark); 5 stamens, not protruding beyond corolla.

Generic name Gr., "bladder", refers to the calyx that becomes greatly inflated around yellow to greenish fruit.

SOLANUM Nightshade

Herbaceous weeds in our area.

Leaves alternate.

Peduncles often from internodal parts of the stem, neither axillary nor opposite a leaf axil (a very unusual situation).

Flowers 5-merous, the corolla often appearing to be pleated; bell-shaped, regular; perfect; 5 fertile stamens on short filaments, their anthers often joined around the style and protruding.

Common name: see family description.

1 Plants with prickles

  2 Corolla yellow; leaves deeply pinnate . . . **S. rostratum**

  2' Corolla not yellow; leaves lobed, but not deeply cut . . . **S. carolinense**

1' Plants smooth, leaves wavy-edged . . .**S. americanum**

SOLANUM AMERICANUM Black Nightshade

W-V 5-9

Open woodlands as well as roadsides, pastures, etc.

Erect stem, often widely branched, glabrous or with very few hairs, angled, to 6 dm tall

Leaves thin, long-petioled, pale green, translucent, alternate, roughly triangular in shape, with irregular teeth.

Inflorescence: drooping, umbel-like cluster, from stem between leaves; peduncled, with 2-5 pedicelled flowers

Flowers to 9 mm. wide; calyx lobes to 7 mm long

Common name "black" for color of berries of this species

SOLANACEAE - STAPHYLEACEAE

B-W 4-10

SOLANUM CAROLINENSE Horse Nettle

Common species in waste areas, especially in gravelly or sandy soil.

Stem branched, spiny, and with stellate hairs, as is whole plant; to 1 m. tall.

Leaves wavy-edged, with 2-5 shallow lobes on each side; to 12 cm. long and about 1/2 as wide.

Inflorescence: several flowers in a raceme-like cluster.

Flowers with reflexed corolla lobes; about 2 cm. wide.

Common name demonstrates common use of the word "horse" to infer a coarse, unattractive plant: one with the biggest and most disagreeable parts, in this case nettles or spines.

Y 5-10

SOLANUM ROSTRATUM Buffalo Bur or Kansas Thistle

Various open areas; a noxious weed; this species is native in western North America and has apparently recently spread to Missouri.

Stems widely branched, spiny (more so than **S. carolinense**), hairy.

Leaves pinnately lobed, hairy on both sides.

Inflorescence: racemes from stem itself.

Calyx so spiny as to be invisible. Later, it encloses the fruit, and resembles a sea-urchin; flowers to 3 cm. wide; anthers all yellow, but one, longer and larger than others, is beaked.

Specific epithet Lat. "beaked", describes 5th anther; reasons for common names obvious, once one has seen the plant.

STAPHYLEACEAE Bladder-nut Family

Woody plants, with opposite, trifoliolate leaves.

Flowers regular, perfect, 5-merous; ovary superior with 3 styles.

W 3-4

STAPHYLEA TRIFOLIA Bladder-nut

Shrubs of rich woodlands or alluvial soil, usually alkaline; often on north or east facing bluffs.

Leaves trifoliolate, opposite, petioled, the terminal long-stalked, the laterals sessile or nearly so and often oblique at base; leaflets fine-toothed.

Inflorescence: long-peduncled, drooping, racemes to 10 cm. long.

5 separate sepals nearly as long as 5 petals; flowers long-pedicelled, themselves to 5 cm. long.

Specific epithet refers to leaves; common name describes the inflated, 3-lobed, thin-walled fruit.

THYMELAEACEAE Mezereum Family

Woody plants with very tough, bitter-tasting bark.

Leaves entire.

Flowers regular, perfect, the sepals often petal-like; ovary superior.

Y 3-4

DIRCA PALUSTRIS Leatherwood

Low areas with rich soil along streams, or on rich wooded north or east facing slopes

Much-branched shrub; swollen nodes give a jointed appearance to stem; very slow growing; when trunk is 5 cm. in diameter, plant is around 100 years old; to 3.3 m. tall.

Leaves simple, alternate, entire, gray-green, short petioled.

Inflorescence: clusters of 2-4 small, nearly sessile flowers subtended by as many hairy bud-scales, opening before plant leafs out.

Flowers without corolla; calyx 4-toothed.

Specific epithet Lat., "of swamps"; common name from very tough bark or from twigs so supple that they can be knotted, and were so used by Indians in basketry or for tying.

TYPHACEAE - URT CACEAE

TYPHACEAE Cat-tail Family

This family consists of only one genus, and since we have only one species of that genus in our area, we include both family and species characters below.

TYPHA LATIFOLIA Common Cat-tail

Br 5-8

Erect herbs of marshy areas, wet ditches, etc., usually in large colonies.

Plants with unbranched stems, to 3 m. tall.

Leaves typical of monocots: long, narrow and sheathing at base, as well as parallel veined.

Flowers unisexual, densely crowded on elongated, narrowly-cylindrical terminal spikes, staminate flowers above, pistillate below.

Flowers too tiny to be diagnosed without the help of magnification; however, it is easy to tell the female portion of the stalk from the male in flower or in fruit: the staminate section of the inflorescence is usually smaller in diameter in flower, and quite barren when the pistillate has formed fruits.

URTICACEAE Nettle Family

All herbaceous plants in our area, some species armed with stinging hairs; watery sap.

Leaves simple, stipulate.

Inflorescence in our area: axillary, simple or branched clusters of tiny flowers.

Flowers unisexual, greenish or white.

1 Leaf margins entire . . . **Parietaria**

1' Leaf margins serrate

2 Leaves alternate (stinging hairs, be careful) . . . **Laportea**

2' Leaves opposite

3 Plant completely without hairs . . . **Pilea**

3' Plants hairy on at least some part

4 Plants with stinging hairs (be careful); sepals separate or nearly so . . . **Urtica**

4' Plants with stingless hairs; sepals fused in a cup or tube surrounding the ovary . . . **Boehmeria**

BOEHMERIA CYLINDRICA False Nettle

G 6-10

Low, wet areas; plants usually dioecious.

Stems erect, usually unbranched; hairs stingless; to 9 dm. tall.

Leaves opposite, coarsely serrate; 3-veined from base; stipules distinct; long-petioled.

Flowers clustered on unbranched, interrupted or continuous spikes, from upper leaf axils; staminate spikes usually interrupted, pistillate usually leafy at tip.

Specific epithet Lat., "cylindric", refers to inflorescence; common name implies similarity to the true Nettle (**Urtica,** which see) with the important difference that this plant has no stinging hairs.

LAPORTEA CANADENSIS Wood Nettle

W 5-8

Wet or rich woodlands, often in extensive stands.

Stem unbranched, somewhat zig-zagged; beset with stinging hairs; to 9 dm. tall.

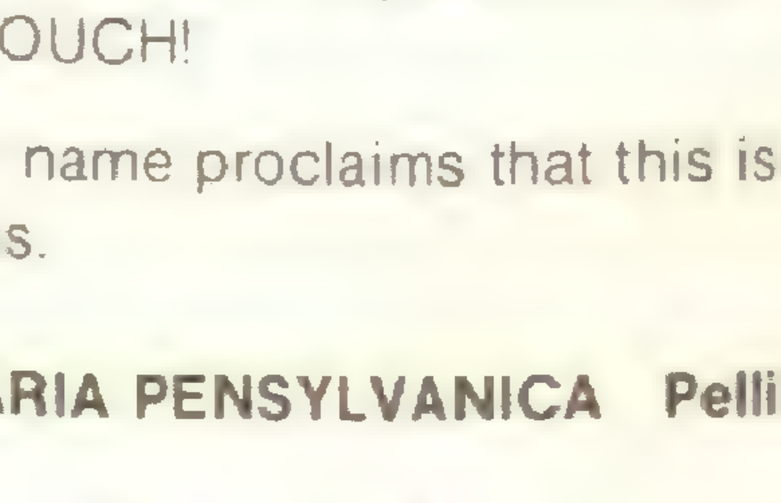
Leaves also with stinging hairs; alternate, coarsely serrate, long-petioled.

Staminate flowers in cymes from axils of lower leaves, rarely longer than leaf petioles; pistillate flowers in loose, branched cymes from axils of upper leaves and usually much longer than petioles; monoecious; plant showy, but DON'T TOUCH!

Common name proclaims that this is a nettle, fully "armed", and that it grows in the woods.

PARIETARIA PENSYLVANICA Pellitory

G 5-10



Open areas, often in alkaline soil.

Stems simple or slightly branched, minutely hairy (but hairs are stingless) to 4 dm. tall

Leaves alternate, entire and without stipules, slender petioled, thin, 3-nerved; upper surface rough

Staminate, pistillate and perfect flowers intermixed in same cymose axillary clusters (from middle and upper leaf-axils); bracts of the inflorescence 2-3 times longer than tiny flowers they subtend.

PARIETARIA PENSYLVANICA Pellitory (con't.)

Generic name Lat., "wall" from type of habitat chosen by some species of this genus.

PILEA PUMILA Clearweed

G 7-10

Low rich or wet areas; often growing in colonies.

Simple to branched stem, sometimes prostrate at base; stingless and mostly glabrous; transparent; to 5 dm. tall.

Leaves opposite, shiny, toothed, 3-veined, long petioled.

Short, drooping clusters of tiny flowers from axils of middle to upper leaves.

Specific epithet Lat., "dwarf"; common name refers to translucency of stem, often used in biology labs to demonstrate uptake of fluids by plants.

URTICA DIOICA Tall Nettle or Stinging Nettle

G 5-10

River valleys, flood plains and other wet areas.

Stem usually unbranched and beset with nettles or bristles to 2 mm. long: plant far from friendly; to 9 dm. tall.

Leaves opposite, stipulate (these to 15 mm. long and erect); slender petioled, serrate and armed with stinging hairs.

Inflorescence many-flowered, from axils of upper leaves, usually longer than petiole of subtending leaf.

Specific epithet Lat., "dioeceous," meaning that staminate and pistillate flowers are on different plants, but this is by no means always true.

VALERIANACEAE Valerian Family

Herbaceous plants, often with an unpleasant odor, due to oil in the roots.

Leaves opposite and without stipules.

Flowers small, in terminal inflorescences.

W 4-5

VALERIANELLA RADIATA Corn Salad

Wet, open areas.

Small, weedy plant, with angled stem (the angles sparingly hairy), loosely forking, to 5 dm. tall.

Leaves opposite, simple, the lower sometimes joined (or almost so) at base, the upper not; usually slightly toothed on lower margins.

Flowers in close, terminal inflorescences, in 4 groups surrounded by bracts, the outer 8 of these fringed.

Stamens protruding.

Generic name the Lat. diminutive of **Valeriana,** another genus of this family, but not found in Missouri; common name refers to fact that the plant is a weed of European grain fields (where corn and grain are synonymous) and can be eaten in salads.

VERBENACEAE Vervain Family

Herbaceous plants in Missouri, except for one genus not found in our area.

Stems often 4-angled.

Leaves opposite (usually) and without stipules.

Flowers with irregular corolla, both this and calyx tubular: often 4-merous, and usually with 4 stamens in 2 unlike pairs.

V 5-10

LIPPIA LANCEOLATA Fog Fruit

Muddy, wet areas.

Stem, or part of it, often prostrate and rooting at the nodes.

Leaves opposite, coarsely serrate; sessile, or very short petioled; sharply serrate from tip to below the middle.

Inflorescence: 1-2 dense knob-shaped heads of crowded, sessile flowers, each head on long (to 9 cm.) leafless peduncle, of which 1-2 per node.

Flowers very small, calyx 2-4 lobed; corolla 4-lobed and definitely 2-lipped.

Specific epithet Lat., "lance-shaped" refers to leaves: common name of some authors is "frog fruit".

VERBENACEAE

VERBENA Vervain

Inflorescence loose, long and narrow, or broad and more or less flat-topped.

Calyx 5-toothed, corolla 5 lobed and nearly regular.

1 Individual flowers 12-25 mm. long . . . **V. canadensis**

1' Individual flowers 4-10 mm. long

2 Main leaves of stem 3-10 (occasionally 15) mm. broad . . . **V. simplex**

2' Main leaves of stem 15-60 mm. broad

3 Main leaves sessile . . . **V. stricta**

3' At least some of the main leaves petioled

4 Corolla blue . . . **V. hastata**

4' Corolla mainly white . . . **V. urticifolia**

VERBENA CANADENSIS Rose Verbena

V 3-11

Rocky glades and other open areas, especially in alkaline soil.

Stem, or part of it, prostrate; rooting at lower nodes; more or less branched; to 6 dm. long.

Leaves very variable; pinnately lobed; petioled, and these slightly winged.

Inflorescence: broad, flat-topped cluster, the bracts subtending individual flowers equal to or shorter than calyx, hairy and often hairy-margined.

Flowers with gland-hairy calyx, to 1.3 cm. long; corolla tube about twice this; very fragrant.

B 6-10

VERBENA HASTATA Blue Vervain

Wet areas.

Stem branched above, rough hairy, to 15 dm. tall.

Leaves coarsely serrate, petioled; sometimes with 2 basal lobes pointing outwards.

Inflorescence: usually many slender spikes in terminal panicle; so crowded that flowers overlap one another; bracts mostly shorter than the calyces.

Flowers: hairy calyx to 3 mm. long, corolla tube somewhat longer.

Specific epithet refers to leaf-shape as being like that of a halberd: similar to an arrow-head except that the basal lobes point outward.

P 5-9

VERBENA SIMPLEX

Glades, prairies and other open areas.

Stems sometimes sparingly branched above; glabrous or sparsely set with stiff, sharp hairs; to 5 dm. tall.

Leaves narrow (to 15 mm. broad), tapering to base; serrate.

Inflorescence: slender spikes terminal on stem and branches, stiffly erect and usually somewhat crowded; bracts mostly shorter than the calyces.

Flowers: calyx usually glabrous, the corolla tube scarcely longer.

Specific epithet Lat., "simple" refers to the usually unbranched stem.

P 5-9

VERBENA STRICTA Hoary Verbena

Prairies, glades, thickets, waste areas.

Stems stout, almost round, densely hairy, to 12 dm. tall.

Leaves almost sessile, stiff hairy and wrinkled above, densely soft hairy below, to 6 cm. wide.

Inflorescence solitary, or few long, thick, densely compact spikes, the hairy bracts as long as calyces.

Flowers: calyx white hairy to 5 mm. long, corolla tube protruding slightly beyond.

Specific epithet Lat., "strict", refers to straight, upright stem; common name to grayish white hairiness of most parts of plant.

W 6-10

VERBENA URTICIFOLIA White Vervain

Weedy plant of open areas.

Stem erect, usually branching from near the base, to 15 dm. tall.

Leaves to 7 cm. broad, serrate, petioled, usually somewhat long hairy

Inflorescence: several very slender spikes from upper axils; few flowered.

Calyx to 2.3 mm. long, much exceeding subtending bracts; sharp-hairy.

Specific epithet tells us that the leaves are like those of the nettle, **Urtica,** which see.

VIOLACEAE

VIOLACEAE Violet Family

Herbaceous plants.

Leaves simple, stipulate and usually alternate.

Inflorescence: solitary, axillary; the flowers usually nodding.

Flowers: 5-merous, perfect, hypogynous and usually irregular.

HYBANTHUS CONCOLOR Green Violet

G 3-6

Rich or rocky woods, along shaded bluffs.

Leafy stemmed, rather coarse plant; hairy; to 9 dm. tall.

Leaves alternate, sharp pointed, more or less hairy, tapered below to narrow petiole; without teeth at flowering time, but leaves produced later are often toothed.

Inflorescence: cluster of small flowers on pedicels down-curving from leaf axils.

Flowers tiny: to 5 mm. long.

Generic name Gr., "humpbacked flower", probably refers to the fact that one of the petals has a convex base; specific epithet Lat., "of one color", refers to greenish flowers, as does common name.

VIOLA Violet

A very difficult genus, as many of the species form hybrids.

Inflorescence: one-flowered, these on axillary or basal peduncles, each bearing 2 small bracts near the middle.

Flowers with the lowest of their 5 petals elongated into a spur; 2 lowest of the 5 stamens also spurred, their extensions projecting into the petal spur.

Violets bloom mainly in the spring; some species may be found blooming again in the fall in some years.

1 Leaves and flowers all on stalks arising from base of plant

2 Flowers basically blue

3 None of leaves deeply lobed, except at base

4 At least some part of leaves, petioles and/or peduncles hairy

5 Some or all leaves longer than broad . . . **V. sagittata**

5' Most or all leaves nearly as broad as long . . . **V. soraria**

4' Plants essentially glabrous

6 Some or all leaves longer than broad . . . **V. sagittata**

VIOLA Violet (con't.)

6' At least some part of leaf almost as broad as leaf is long

7 Flowers usually overtop leaves . . . **V. missouriensis**

7' Leaves usually overtop flowers . . . **V. papilionacea**

3' Some or all leaves deeply lobed

8 Leaves palmately divided into several nearly equal lobes . . . **V. pedata**

8' Some leaves 3-lobed, the central lobe by far the largest . . . **V. triloba**

2' Flowers white . . . **V. pallens**

1' Plants with stems bearing alternate leaves and axillary flowers

9 Flowers basically white or yellow

10 Flowers white

11 Stipules fringed . . . **V. striata**

11' Stipules deeply lobed . . . **V. raffinesquii**

10' Flowers yellow . . **V. pensylvanica**

9' Flowers blue . . . **V. raffinesquii**

V 3-5

VIOLA MISSOURIENSIS

Low, rich soil or moist limestone ledges.

Glabrous plant

Leaves long-triangular with cordate base and longish tip; coarsely round-toothed; all from base of plant.

Flowers all from base of plant, the corolla pale violet, with a darker zone around a white center, spurred petal glabrous; sepals with narrow, white margins.

VIOLACEAE

VIOLA PALLENS Smooth or Northern White Violet

W 4-5

A rare plant of very limited distribution in our area; moist shady crevices, usually in sandstone; known here only from Ste. Genevieve county, one of its southernmost stations in the U.S.

Small plant with slender, creeping stem from base; leaves and peduncles all basal.

Leaves glabrous on both surfaces, light green, rounded or very blunt-tipped; cordate; petioled, often dotted with red, and more or less hairy.

Flowers on peduncles that usually overtop the leaves; white with purple veins; fragrant.

Specific epithet Lat., "pale", probably refers to color of leaves or to white flowers; common names self-explanatory.

VIOLA PAPILIONACEA Common or Meadow Violet

P-V 3-6 & 10-11

Open areas (it can become a real problem in lawns), usually in moist soil.

Flowers and leaves all basal.

Leaves to 12 cm. broad, mostly overtopping flowers; cordate at base.

Flowers 2-3 cm. across; spurred petal boat-shape.

Specific epithet Lat., "butterfly-like"; common names self-explanatory.

VIOLA PEDATA Pansy or Bird's-foot Violet

B or V & B 3-6 & 9-11

Rocky, open areas, in poor and usually acid soil.

Plant glabrous or nearly so; leaves and flowers all basal.

Leaves soft and deeply divided, the earliest and latest usually smaller and less dissected.

Flower 3-4 cm. wide, the petals all glabrous; tips of large, orange stamens protrude; flowers of 2 sorts — all blue, or with upper petals purplish and lower blue.

Specific epithet Lat., "foot-like" refers to same character as does 2nd common name.

Y 3-5

VIOLA PENSYLVANICA Smooth Yellow Violet

Slopes of rich woods, low areas, thickets, etc.

Stems slender; smooth.

Leaves basal plus 2-4 on upper stem, short pointed, round toothed, wider than long, often cordate; petioled.

Flowers on long stalks from axils of upper leaves, and overtopping them; petals bright yellow, with brown-purple veins near base.

W or B 3-5

VIOLA RAFINESQUII Wild Pansy or Johnny-jump-up

Slender, glabrous plant, often branched from base; to 40 cm. tall.

Leaves small, the basal ones rounded, the stem leaves less so; all petioled and with rounded teeth; stipules large and much dissected.

Flowers small (to 10 mm. long), petals nearly twice as long as sepals and tinged with violet on the outside.

V 4-6

VIOLA SAGITTATA Arrow-leaved Violet

Prairies and other open, usually wet, areas.

Flowers and leaves all basal; leaves 2-3 times as long as broad, arrow-shaped at base, the points, however, more spreading; toothed.

Flowers to 2.5 cm. wide, the violet-purple petals often dark veined; white center; spurred petal hairy at base.

Specific epithet Lat., "arrow shaped", refers, as does common name, to leaves.

VIOLACEAE

VIOLA SORARIA Woolly Blue Violet

V 3-6

Dry open woods or thickets, sandy soil along streams, etc.

Hairy plant; similar to **V. papilionacea,** but petioles and lower leaf surfaces densely hairy, the mature leaves dark green and thickish; toothed; cordate at base; all basal.

Peduncles more or less hairy; all basal, about as tall as leaves.

Lateral petals densely white-hairy; all petals white at base.

Specific epithet Lat., "sisterly", for its resemblance to other species.

VIOLA STRIATA Pale Violet

W 3-6

Usually in low, rich areas, such as woodland valleys, along streams.

Stems to 30 cm. tall, erect or reclining, several from base, glabrous or nearly so, leafy.

Basal and lower stem leaves blunt-tipped, the upper more pointed; stipules leaf-like, large, fringed.

Flowers solitary from leaf axils, long peduncled, the lower petal with purplish lines at base; lateral petals hairy.

Specific epithet Lat., "with fine lines", refers to lower petal of flowers, common name to its color.

VIOLA TRILOBA Three-lobed Violet

V 4-5

Dry, open areas, frequently in acid soil.

Hairy plant.

Some or all leaves 3-5-lobed, the middle segment broad; lower surfaces and petioles especially hairy.

Flowers to 3 cm. across, the petals paler outside; spurred petal very hairy at base.

Specific epithet and common name refer to same leaf character.

VITACEAE Grape Family

Mostly woody vines, climbing by tendrils.

Leaves alternate, the tendrils and flower clusters produced opposite them.

Flowers regular, hypogynous, usually perfect, 4-5-merous.

1 All leaves simple

  2 Flowering clusters much longer than broad; petals joined at their tips . . . **Vitis**

  2' Flowering clusters much broader than long; petals free . . . **Ampelopsis cordata**

1' Some or all leaves compound . . . **Parthenocissus**

AMPELOPSIS CORDATA Raccoon Grape

W 5-7

Wet, mostly wooded, areas.

High-climbing vine, with few or no tendrils on flowering branches; nearly glabrous.

Leaves not lobed, usually cordate at base, coarsely toothed.

Inflorescence much broader than long; long peduncled; opposite the leaves; repeatedly forked.

Flowers 5-merous, but the calyx shallowly 4-lobed; petals separate; flowers with stamens better developed than pistil and vice versa, the 2 sorts on same plant.

Generic name Gr., "appearance of a vine"; specific epithet Lat., "heart-shaped", for base of some leaves; the Fruits are commonly eaten by songbirds, but we do not know whether they are equally relished by raccoons.

PARTHENOCISSUS QUINQUEFOLIA Virginia Creeper or Woodbine

G 5-8

Open, rich woods, or other open areas.

High-climbing vine, adhering to its support by means of numerous adhesive disks at the ends of much-branched tendrils.

Leaves long-petioled; 3-7 leaflets coarsely toothed, pale green above, usually short-petioled.

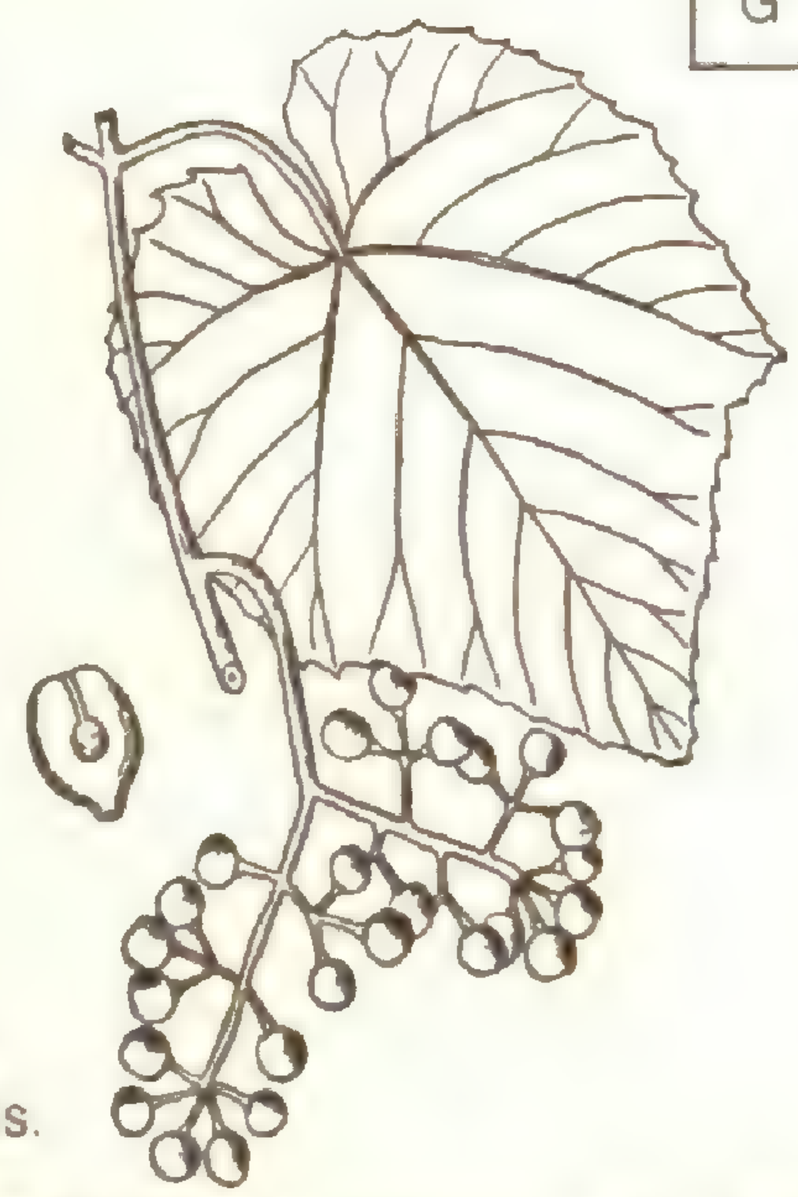
Inflorescence terminal and from upper leaf axils, usually longer than wide, the flowers in umbel-like clusters.

Specific epithet Lat., "five-leaved", refers to **leaflets**.

VITACEAE

VITIS Grape

G 5-7



There are 8 species of wild grape in Missouri, 7 of them sometimes found in our area; as they are difficult to tell apart we list only general characteristics:

Plants mostly climbing by means of coiling tendrils.

Leaves usually cordate at base and simple, but often lobed.

Inflorescence much longer than broad.

Flowers 5-merous, essentially without a calyx; petals joined at their tips and soon falling.

Bark of old stems loosening into flaky or ropy shreds.

If you still are not sure that what you are observing is indeed a wild grape, slit a twig longitudinally. If the pith is brown, interrupted at each node by a cross partition, you have a species of **Vitis**; but if the pith is white, and not interrupted, you have **Ampelopsis cordata**. The two plants are otherwise confusingly similar.

OTHER USEFUL WILDFLOWER BOOKS

Denison, E. 1972. **Missouri Wildflowers**. Missouri Conservation Commission. A popular guide with color photographs of the species.

Fernald, M. L. 1950. **Gray's Manual of Botany** (8th Edition). Van Nostrand Reinhold Co. New York. A technical manual. Missouri is just within the western edge of the region covered in this book

Gleason, H. A. 1952. **The new Britton and Brown Illustrated Flora of the Northeastern States and Adjacent Canada**. New York Botanical Garden. New York. An illustrated technical manual of the flora.

Newcomb, L. 1977. **Newcomb's Wildflower Guide**. Little, Brown. Boston. A popular guide for an area just east and north of Missouri.

Peterson, R. T. and M. McKenny 1968. **A Field Guide to Wildflowers of Northeastern and North-Central North America**. Houghton Mifflin. Boston. A popular guide for an area just to the east and north of Missouri.

Rickett, T. C. 1954. **Wildflowers of Missouri**. University of Missouri Press. Columbia, Mo. A descriptive account of common wildflowers arranged by seasons.

Steyermark, J. A. 1963. **Flora of Missouri**. Iowa State University Press. Ames, Iowa. Excellent, exhaustive treatment of the state's flora with technical keys and range maps.

Steyermark, J. A. 1940. **Spring Flora of Missouri**. Lucas Publishing Co. Columbia, Mo. A manual with technical keys, for the spring wildflowers of the state.

OTHER USEFUL WILDFLOWER BOOKS

Denison, E. 1972. **Missouri Wildflowers**. Missouri Conservation Commission. A popular guide with color photographs of the species.

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Steyermark, J. A. 1940. **Spring Flora of Missouri**. Lucas Publishing Co. Columbia, Mo. A manual with technical keys, for the spring wildflowers of the state.

GLOSSARY

Acid soils: technically, soils with pH < 7; generally used for soils developed on sandstone, granite, or gneiss bedrock which are coarse in texture and poor in plant nutrients such as calcium.

Alkaline soils: technically, soils with pH > 7; generally used for soils developed on limestone or other limey bedrock which are often fine textured and rich in plant nutrients such as calcium.

Alternate: arrangement of buds and/or leaves in which these occur singly at nodes on a stem.

Androecium: the male component of a flower consisting of all its stamens.

Annual: of one season's duration from seed to flowering and fruiting and death.

Anther: the pollen-bearing part of a stamen (*).

Appendage: an attached, or secondary part, as the corona of **Asclepias** (**).

Appressed: lying close and flat against a surface.

Auriculate: usually applied to leaves with basal lobes. These auricles of the leaves are presumed to resemble ears.

Awn: bristle-like tip or appendage.

Axil: the upper angle between a leaf and the stem from which it grows.

Axillary: applies to bud, twig or inflorescence produced in the axil (*).

Basal: applies to leaves appearing to grow directly from the ground. These may be petioled, as in **Hepatica** (p. 312), or they may form a basal rosette of almost sessile leaves, as in **Taraxacum** (p. 156).

Biennial: refers to plants that produce roots and leaves in their first season's growth, and flowers and fruit in their second (and last).

Binomial nomenclature: the system of naming plants that is recognized by botanists throughout the world. It consists of two Latin words, the first names the genus to which the plant belongs, the second differentiates one species from other species of that genus. This second name is the "species epithet." The first letter of the genus name is always capitalized, the first letter of the specific epithet is not.

Bi-pinnate: twice pinnately compound.

Blade: the expanded portion of a leaf (*) or petal.

Bract: a more or less modified leaf, usually subtending a flower (**) or an inflorescence .

(*See inside front cover **See inside back cover)

Calyx: the outer, or lower-most whorl of floral parts, consisting of separate or joined sepals (*).

Carpel: the basic unit of the gynoecium; synonymous with "simple pistil" in flowers in which the gynoecium consists of 1 or more simple pistils, or used to describe the ovule bearing unit in a compound pistil.

Cauline: adjective referring to plants having a true stem, or to plant parts on a stem as "cauline leaves," meaning stem leaves.

Chaff: a dry, bract-like part, usually used as a diagnostic characteristic of certain generain the Asteraceae, where it is found subtending individual disc florets. (**).

Clammy hairy: hairs slightly sticky or wettish.

Clasping: leaf with basal lobes that partly or wholly surround stem (*).

Claw: narrowed base of certain petals and/or sepals.

Cleistogamous: describes flowers of certain plants that are self-pollinated and fertilized in the bud which never opens.

Complete: describes flowers with calyx, corolla, androecium and gynoecium.

Compound: composed of 2 or more similar parts, as a compound pistil has several compartments in the ovary, or a compound leaf is made up of several leaflets rather than of a single blade (*).

Connate: united or joined.

Convolute: rolled up longitudinally.

Cordate: heart-shaped (*).

Corolla: second whorl of floral parts, above the calyx, and consisting of separate or joined petals (*).

Corona: inner, petal-like appendages, sometimes taking the shape of a sort of crown, as the word implies (**Milkweed Flower).

Corymb: a more or less flat-topped inflorescence of stalked flowers, the outermost of which open first (**).

Cyme: a more or less flat-topped inflorescence of stalked flowers, the innermost of which open first (**).

Deciduous: refers to plant parts that do not persist through several growing seasons, or that fall early in the plant's development.

Decurrent: extending downward along a stem, as the leaf bases of **Verbascum thapsus**

(*See inside front cover **See inside back cover)

Dicot: abbreviation of dicotyledon, referring to the group of flowering plants with 2 seed leaves (cotyledons). Dicots tend to have flower parts in 4's, 5's, or multiples thereof and to have leaves with net venation.

Dioecious: describes species in which staminate and pistillate flowers are produced on different plants.

Disc floret: The tubular florets of the Aster family, as distinguished from the ray florets (**).

Endemic: growing as a native in a usually limited, single area.

Entire: refers to leaf or leaflet margins that are not toothed (*).

Epigynous: perianth and androecium attached above (**epi-**) the gynoecium; hence this term applies to flowers with inferior ovaries (*).

Exstipulate: refers to leaves without stipules.

Family: a group of plant genera presumed to share distant ancestry and to be more closely related to each other than to genera of other families.

Fertile: refers to pollen-bearing stamens and pistils capable of producing fruit.

Filament: the stalk of a stamen, to which anthers are attached (*).

Floret: small flowers characteristic of the inflorescence of certain plant families, notably the Asteraceae.

Fruit: a ripened ovary with its attached parts, bearing seeds.

Genus: a group of species classified as members of the same plant family, and presumed to be more closely related to each other than to species of other genera of that family. This is the level at which groups of organisms are usually recognized by laymen, i.e., "oaks" **(Quercus)** or "goldenrods" **(Solidago).**

Glabrous: not hairy.

Glandular: bearing secretory organs.

Glaucous: covered with a whitish, waxy substance that is readily rubbed off; having a whitish cast.

Gynoecium: the female component of a flower, including as many pistils as are present, or synonymous with pistil, when only one is present.

Gynostegium: a structure, characteristic of the Milkweed Family (Asclepiadaceae), in which the stamens adhere to the gynoecium.

Head: a dense cluster of flowers (the individual flowers are usually small and are referred to as florets).

(*See inside front cover **See inside back cover)

Herbaceous: refers to plants without woody parts, which survive severe climatic conditions by losing all (or almost all) above-ground parts at the end of a growing season. "Almost all" refers to leaf rosettes that often survive throughout the year at ground level.

Hood: a structure characteristic of **Asclepias**.

Hypogynous: perianth and roecium attached below (**hypo**) the gynoecium; hence this term applies to flowers with superior ovaries (*).

Imbricate: overlapping, as shingles do.

Imperfect: refers to flowers that are only pistillate or only staminate: unisexual.

Incomplete: refers to flowers that lack one or more of the typical floral structures: calyx, corolla, androecium, gynoecium.

Inferior ovary: refers to that of epigynous flower in which the other floral parts are attached above the summit of the ovary.

Inflorescence: a flower cluster, the arrangement of the flowers; often this is an important clue to plant identification.

Internode: length of stem between two nodes (*).

Involucre: small leaf-like parts subtending a flower or an inflorescence (see bract) (**).

Irregular: flowers so shaped that they can be divided into equal halves by only a single plane; i.e., bilaterally symmetrical.

Leaflet: one part of the divided blade in a compound leaf; readily identified as there is never a bud at the base of the leaflet itself (*).

Ligulate: strap-shaped; often used to describe ray florets of plants in the Asteraceae.

Lobes: a part of an organ such as a petal or leaf that is partially, but not wholly, divided.

Membranaceous: with a texture similar to that of parchment (i.e., thin, more or less translucent, pliable).

Monocot: abbreviation of monocotyledon, referring to the group of flowering plants with a single seed leaf (cotyledon). Monocots tend to have flower parts in 3's or multiples thereof and to have leaves with parallel venation (i.e., the veins run lengthwise and parallel to one another and the edge of the leaf).

Monoecious: describes species in which unisexual staminate and pistillate flowers are both produced on same plant.

Neutral: a flower with a perianth but no andro- or gynoecium.

(*See inside front cover **See inside back cover)

Node: the part of a stem at which leaves and/or buds are produced (*).

Odd-pinnate: pinnately compound leaf with single terminal leaflet, making the total of leaflets an odd number (*).

Opposite leaves: 2 produced at a single node, on opposite sides of the stem (*).

Ovary: ovule-bearing part of pistil (*); organ of flowering plants that becomes a fruit.

Ovule: the egg-containing structure within the ovary (*); it becomes the seed.

Palmate: lobed, divided or veined from a central point, more or less as are the fingers of one's hand (*).

Panicle: a branching, more-or-less elongate, inflorescence (**).

Pappus: modified calyx of florets in the Aster Family, adapted to function as dispersal mechanism for fruits (**).

Parallel: position of main veins in typically strap-shaped monocot leaves, paralleling each other from leaf base to tip.

Pedicel: stalk of single flower in a more than 1-flowered inflorescence (**).

Peduncle: stalk of a more than 1-flowered inflorescence, or of single flower in solitary inflorescence (**).

Perennial: refers to plants that persist from year to year; see Annual and Biennial terms that apply to non-perennial plants.

Perfect: refers to flowers with both functional stamens and pistils: bisexual.

Pistillate: having functional pistils, but not stamens.

Plumose: finely hairy, as in a plume.

Pollinia: masses of pollen transferred as a whole from one flower to another, as in orchids and milkweeds.

Prostrate: lying flat on the ground, as do the stems of some plants.

Punctate: dotted with small depressions, or with colored or translucent dots.

Raceme: inflorescence of pedicelled flowers on a common central axis or rachis (**).

Rachis: the stalk or axis of an inflorescence, or of a compound leaf.

Ray floret: strap-shaped flower produced by many members of the Asteraceae (**).

(*See inside front cover **See inside back cover)

Receptacle: the usually enlarged tip of a stem or peduncle on which are borne the parts of solitary flowers, or the florets of the Asteraceae (* **) or other plant families with dense heads of small flowers.

Recurved: bent downward or backward.

Reflexed: abruptly bent downward or backward.

Regular: refers to flowers with their several sorts of parts so arranged that the flower can be divided into equal halves on any of a series of diagonal lines; i.e., radially symmetrical flowers.

Revolute: rolled backward, as some leaves with their margins rolled toward the lower side.

Rhizome: underground stem, distinguished from true root by presence of nodes and buds or scale-like leaves.

Rootstock: synonymous with rhizome (see above).

Runner: a usually prostrate stem that takes root at nodes and/or tip.

Scabrous: rough to the touch.

Scape: leafless flowering stem, rising from the ground, as in dandelions.

Scarious: usually used in descriptions of bracts that are thin, dry and somewhat translucent.

Scorpioid: coiled with the tip inwards, as is the tail of a scorpion; this is characteristic of the inflorescence of some plant familes, while still in bud. In a technical botanical sense these inflorescences are often referred to as helicoid cymes.

Seed: the ripened ovule.

Sepal: one of the parts of a calyx (*); usually green and leaflike.

Serrate: refers to saw-toothed leaf margins (*).

Sheathing: usually refers to grass-like leaf base, surrounding a stem.

Shrub: woody plant with more than one main stem, as opposed to typically single trunk of trees.

Simple: refers to leaf with single blade (*) or to an unbranched inflorescence.

Solitary: inflorescence of single flower.

Spadix: thick, fleshy spike, inflorescence typical of members of the Araceae.

Spathe: bract or leaf that typically subtends or surrounds a spadix (see above).

(*See inside front cover **See inside back cover)

Specific epithet: second part of Latin binomial, distinguishing one species of a genus from others.

Spike: inflorescence of sessile flowers on common axis or rachis (**).

Spreading: standing outwards, usually in a horizontal position.

Spur: a usually sac-like projection of the floral perianth, in which nectar is produced in order to attract pollinating insects (see **Viola**, p. 360 or **Aquilegia**, p. 310).

Stipel: the 'stipule' (see below) of a leaflet.

Stipules: paired leaf-like structures at bases of true leaves; good diagnostic character in describing members of certain plant families.

Stolon: synonymous with runner (which see).

Striate: marked with fine longitudinal lines.

Strigose: covered with closely appressed, stiff hairs.

Style: the usually elongate connecting link between the ovary and stigma of a pistil.

Substrate: the substance on which an organism is growing.

Subtend: refers to position of one organ (usually a leaf or bract) closely below another (as a leaf subtends a bud or a bract subtends a flower * **).

Superior ovary: refers to that of hypogynous flower in which other floral parts are attached below the pistil.

Tendril: thin, twisting part by means of which certain plants attach themselves to supports.

Tepal: convenient term applied to perianth segments of flowers in which petals and sepals are not clearly differentiated.

Terminal: produced at tip of stem or branch.

Ternate: three-parted.

Trifoliolate: with three leaflets.

Tuber: thickened underground part in which plants store the products of photosynthesis conveniently for their own use, but often used by man (the "Irish potato" is a tuber).

Tubular: refers to calyx and/or corolla of united parts, with the united portions forming a tube.

(*See inside front cover **See inside back cover)

Umbel: umbrella-like inflorescence, the peduncles arising from common point at tip of stem (**).

Veins: vascular bundles (the "plumbing system" of higher plants), their pattern in leaf venation often referred to in plant descriptions.

Verticillate: arranged in whorls.

Winged: refers to a thin strip of tissue sometimes found along stem or petiole or the rachis of a compound leaf.

Woody: refers to trees and shrubs, plants that remain alive above ground throughout the year, as opposed to herbaceous plants (which see).

(*See inside front cover **See inside back cover)

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MISSOURI WILDFLOWERS OF THE ST. LOUIS AREA
ERRATA

Page 10: under #35, 1st listing should be
Erigenia bulbosa . . . . . 2-4 Apiaceae

Page 11: insert
61. Sanicula gregaria . . . . . 3-7 Apiaceae
eliminate S. gregaria, under #64
under #65, 1st listing should be
Sanicula gregaria. . . . . 3-7 Apiaceae

Page 13: eliminate Sanicula gregaria, under 94
under #95, 1st listing should be
Sanicula gregaria. . . . . 3-7 Apiaceae

Page 18: under #55, Mitella diphylla should be listed as belonging in the Saxifragaceae

Page 64: insert, under Pink to Red flowers,
42. Gerardia tenuifolia . . . . . 8-10 Scrophulariaceae

Page 65: eliminate Gerardia tenuifolia, at #45

Page 84: under Erigenia bulbosa, description of leaves should read:
Leaves more than once compound, the divisions less than 1 cm wide; basal leaves long-petioled, with dilated sheathes.

Page 100: under description of Asteraceae, para. 3, line 3, should read:
a group of tubular florets (the disc), this accounting for generic names referring to the

Page 103: 17' should read as follows:
17' Florets creamy; leaves more or less triangular . . . Brickellia
under III, next to last line should read:
of working with the appended key. We list below only the sunflower type ("radiate") heads with yellow ray florets.

Page 104: under Ray florets neutral, add, on bottom line, after V. Helianthoides (usually)
under 3 should read:
3 Flower heads less than 1 cm across, with short ray florets . . . Solidago
3' Flower heads usually more than 1 cm across, with long ray florets

Page 105: 17 should read:
17 Ray florets yellow, toothed (although this is often difficult to see), usually neutral; "seeds" flat . . . . . Helianthus

Page 108: Add, at bottom of page:
5' Involucral bracts obtuse, or with short, often purple tips . . . A. cordifolius

Page 109: 15 should read as follows:
15 Corolla teeth on disc florets longer than tube . . . . A. lateriflorus
15' Corolla teeth on disc florets shorter than tube. . . . A. simplex
Add, at end of description of Aster anomalus,
Specific epithet may refer to anomaly of large heads with shaggy bracts, similar to those of A. novae-angliae, combined in this species with the petioled, cordate leaves characteristic of others.

Page 111: change top line to read:
Aster ericoides Heath or Many-flowered Aster
and add, at end of the description:
Specific epithet and 1st common name refer to heather-like leaves and slender branches.

Page 132: under Helianthus description, 2 should read:
2 The ray florets are never fertile.
4 should read:
4 Each disc floret is subtended by a chaffy bract.

Page 143: Last line under Parthenium integrifolium should read:
generic and common names

Page 147: First line describing Rudbeckia missouriensis should read:
Limestone glades, or other dry, open areas.
Paragraph describing leaves should read:
Leaves entire, narrower than those of R. hirta, and more uniform in size.

Page 150: under Silphium integrifolium, 1st line about name should read:
Common name for its usually resinous sap; specific

Page 156: insert asterisk after Tragopogon dubius

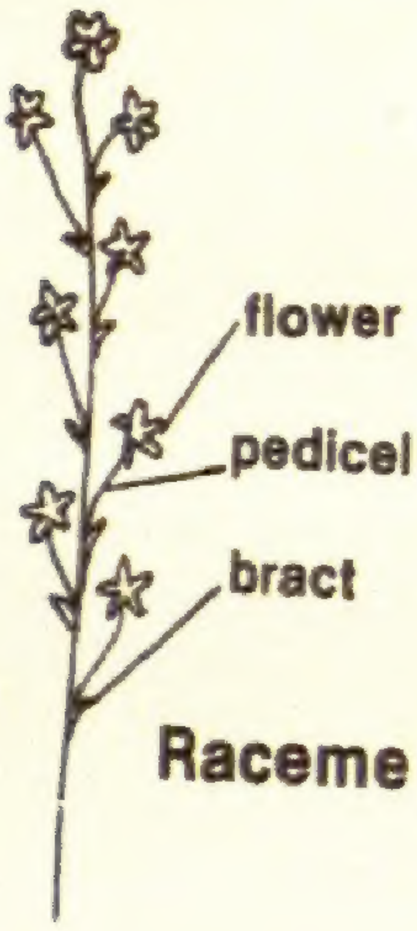
Page 157: insert asterisk after Tragopogon porrifolius

Page 168: insert asterisk after Heliotropium indicum

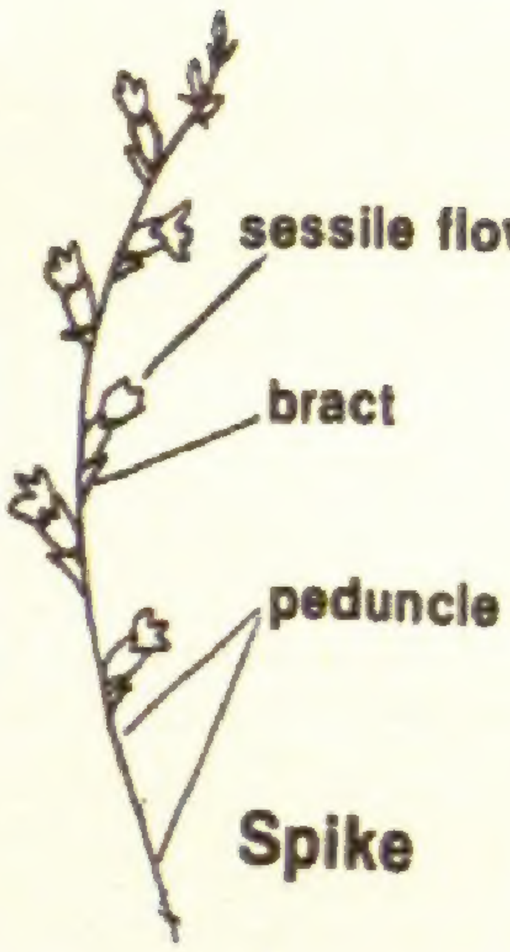
Page 238: under description of corolla of the flowers of the Gentianaceae, eliminate word, tubular

Page 306: under Lysimachia, 3rd line of flower description should read:
lobes wide-spreading, broad, but usually ending

Page 314: change Ranunculus key as follows:
4 One or more basal leaves not deeply lobed or divided . . . R. harveyi
4' All leaves basically similar, although stem leaves may be smaller or with fewer lobes



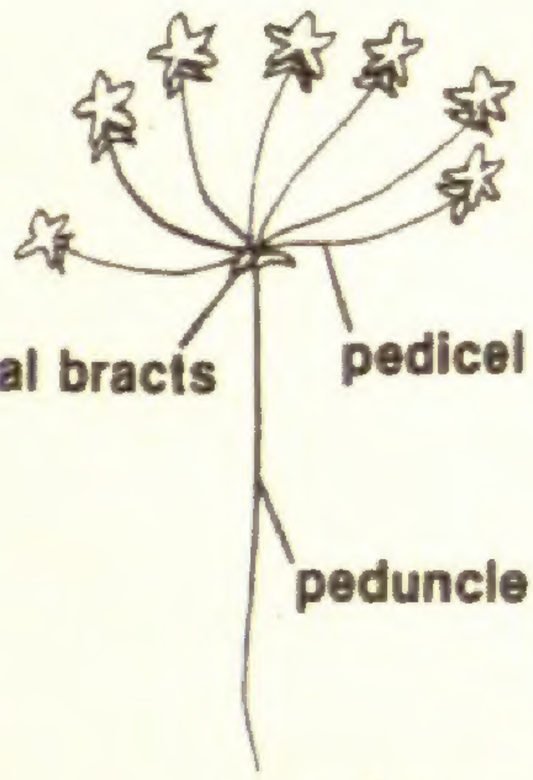
Raceme



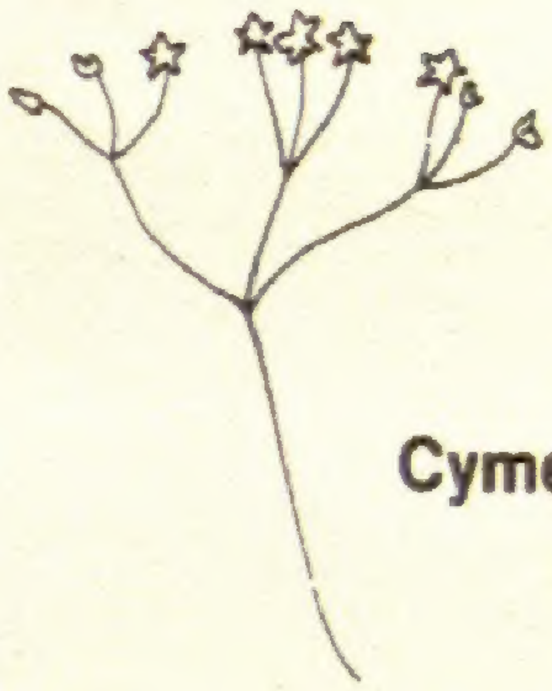
Spike

Helicoid or
Scorpioid Cyme

Corymb

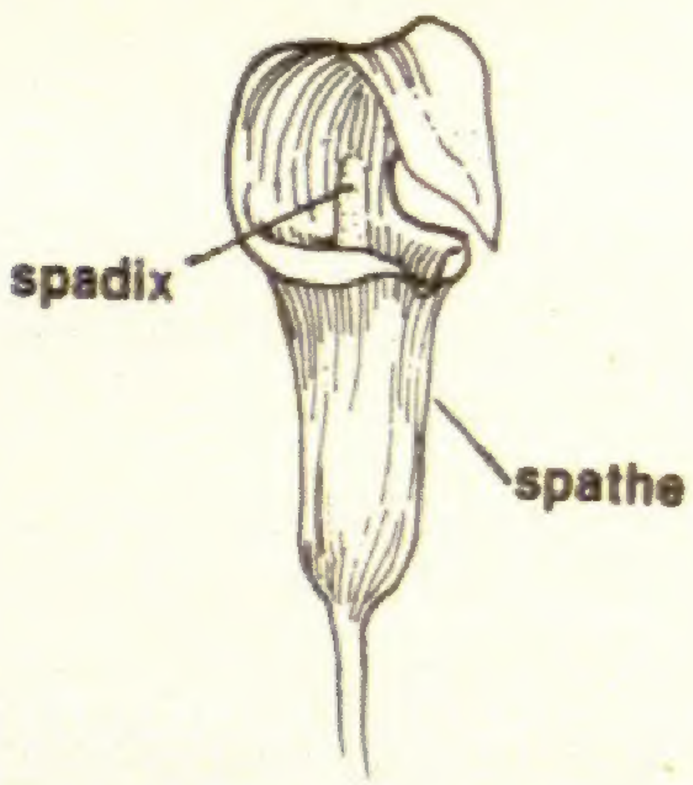


Umbel



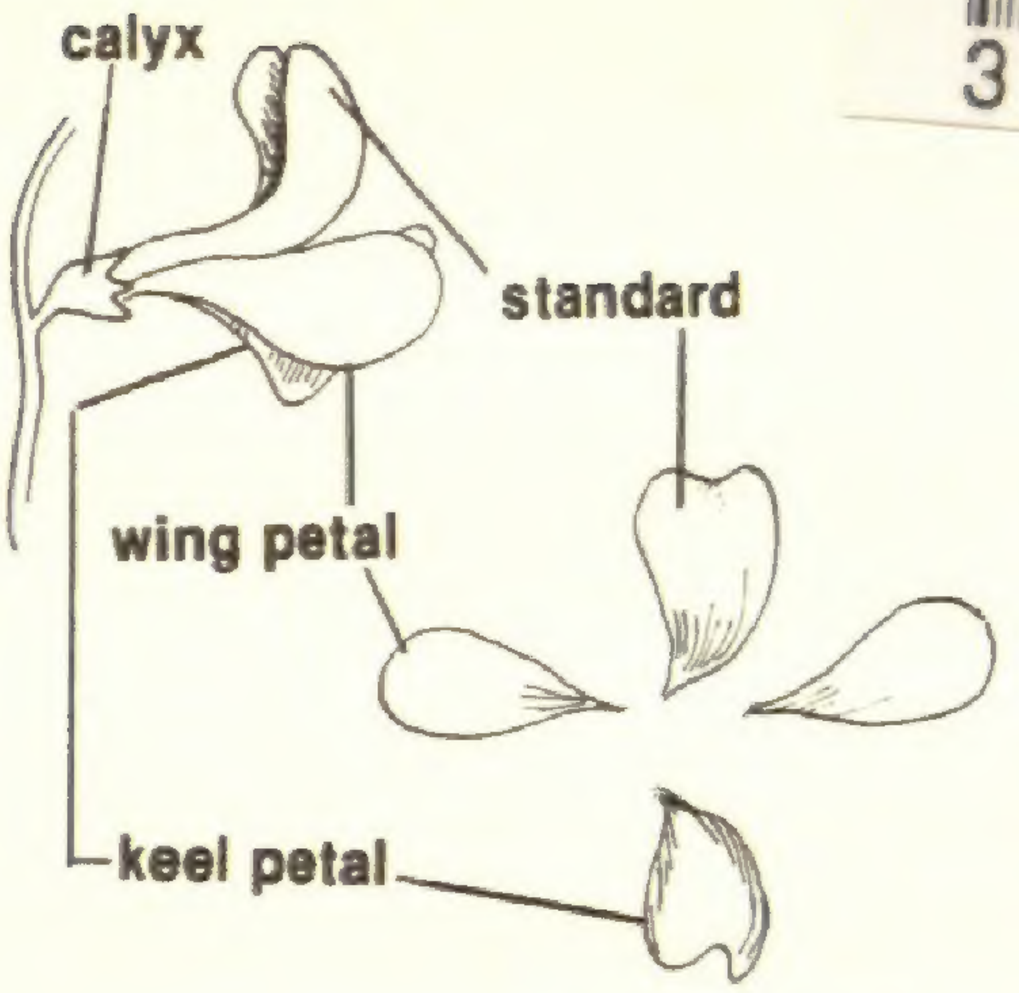
Cyme

Panicle

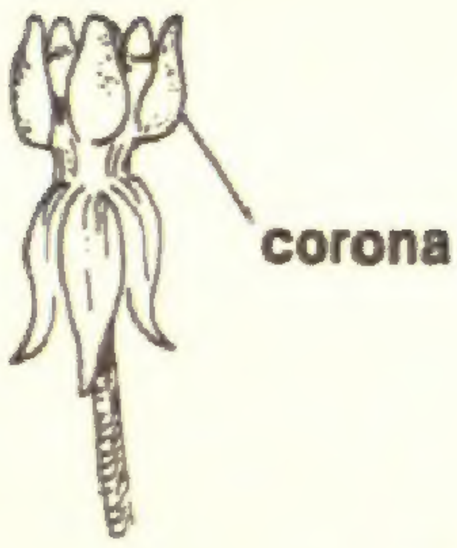


Jack-in-the-pulpit

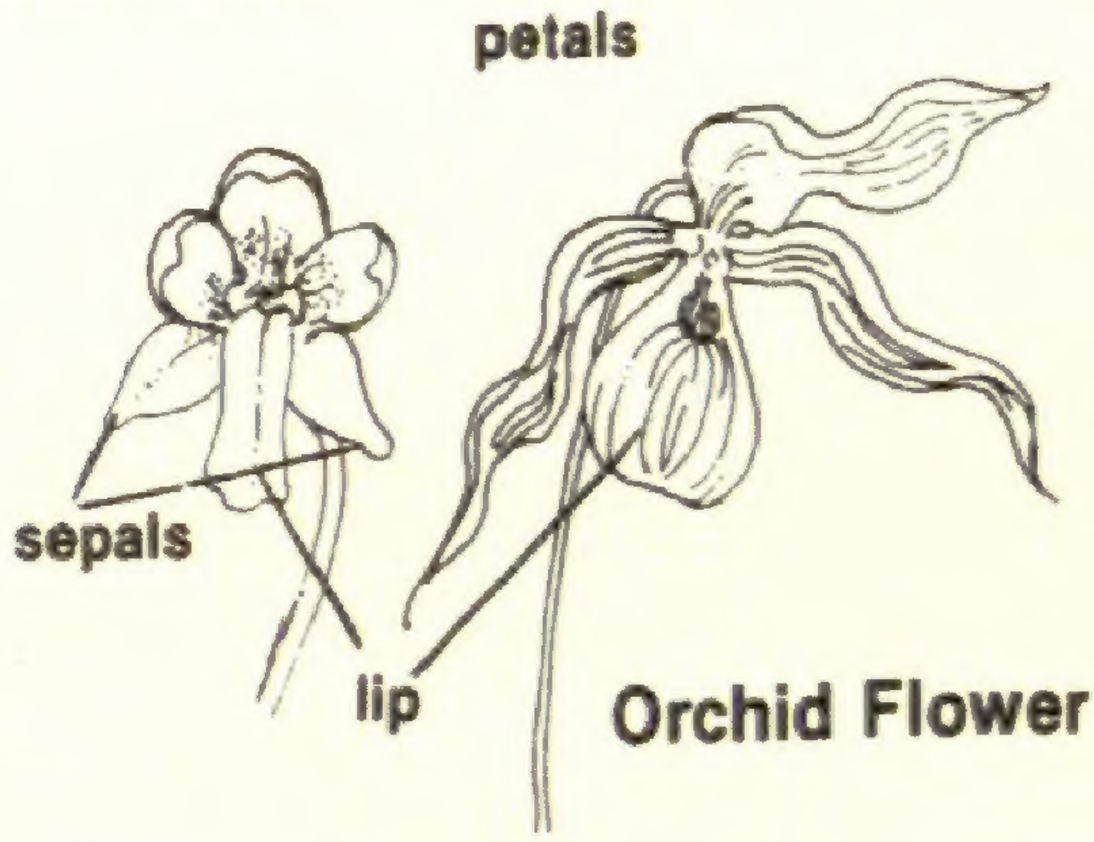
Missouri Botanical Garden Library
3 1753 00204 2650



Pea Flower

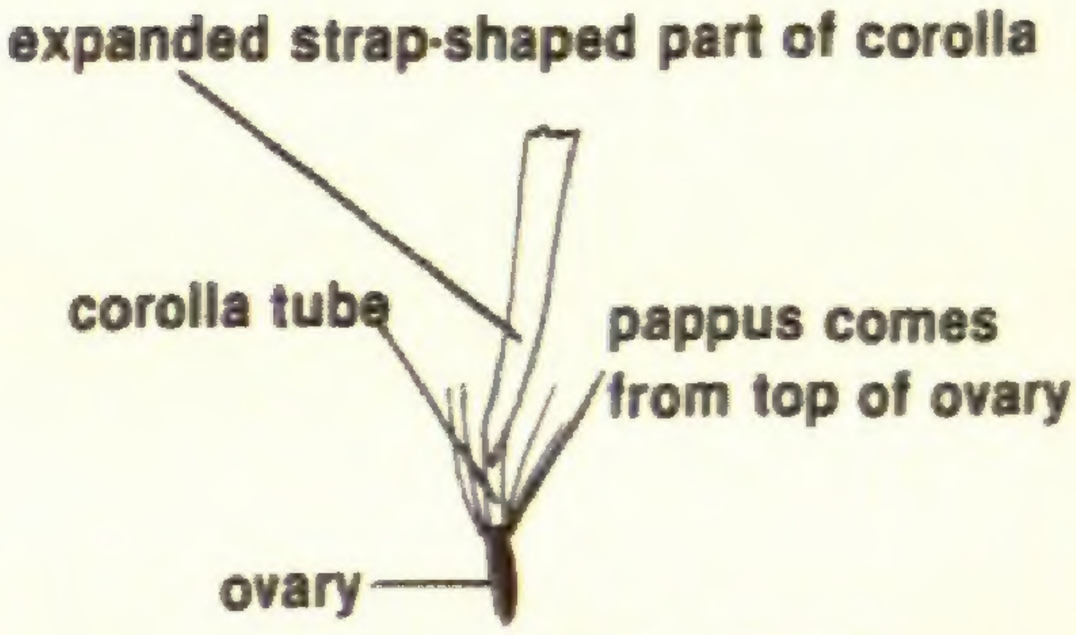


Milkweed Flower

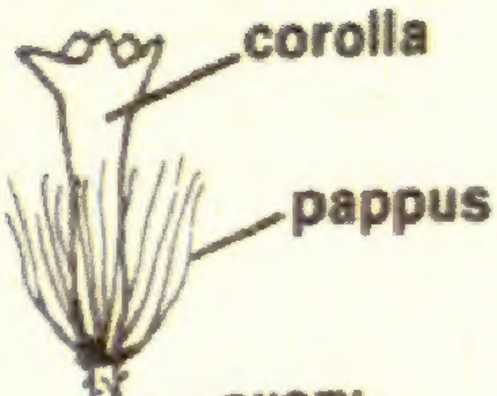


Orchid Flower

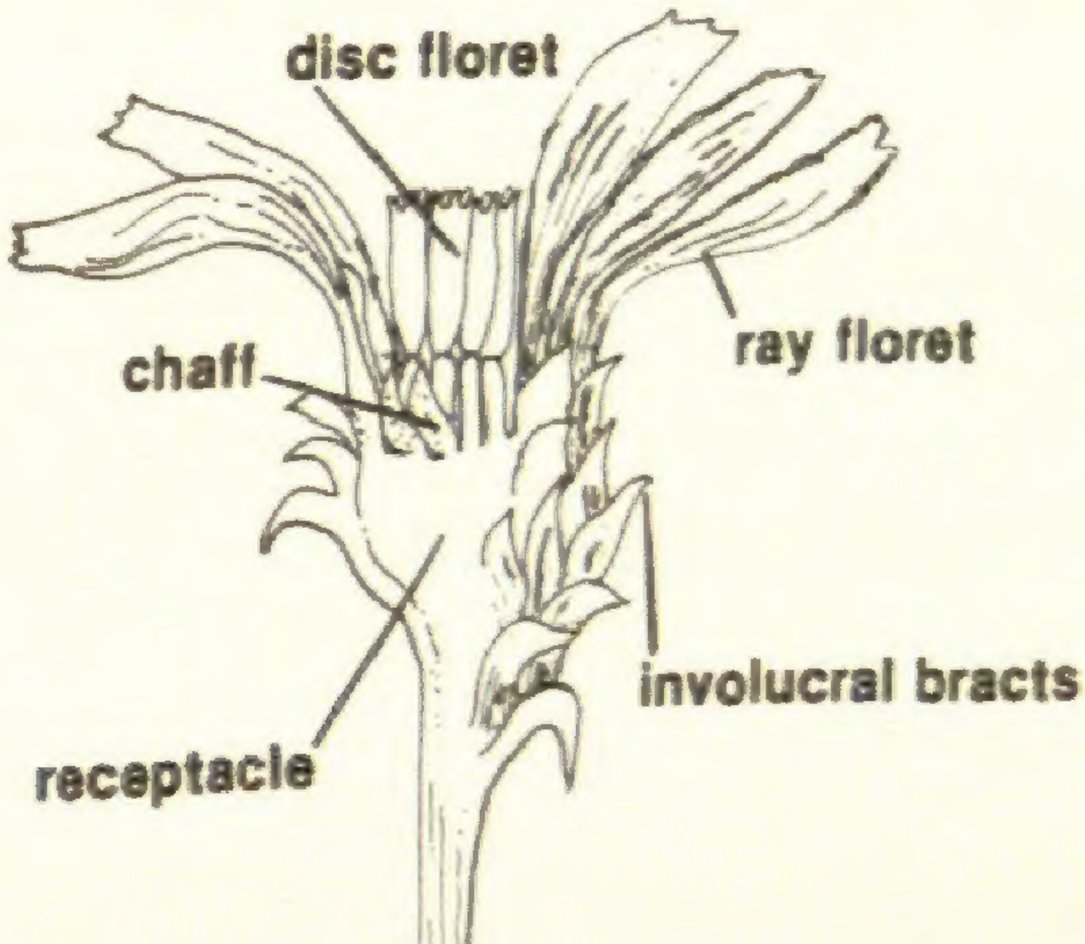
Composite Flower Head



Ray Floret



Disc Floret



Clematis fremontii
var. riehlii